

# *Haida Marine Traditional Knowledge Study*

## Volume 3: Focal Species Summary



*Prepared for:*  
Council of the Haida Nation  
*by:*  
Haida Marine Traditional  
Knowledge Study Participants,  
Janet Winbourne, and  
Haida Oceans Technical Team,  
Haida Fisheries Program

August 18, 2011

## Haida Marine Traditional Knowledge Study Participants

### ***Massett***

Wesley Bell  
Oliver Bell  
John Bennett  
Robert Bennett  
Robin Brown  
Stephen Brown  
Vince Collison  
Ernest Davis  
Robert (Tubby) Davis  
BJ Dudoward  
Dean & Madeline Edgars  
Margaret Edgars  
Timmy Edgars  
Henry Hageman  
Francis Ingram  
Claude Jones  
Kelly Jones  
Reynold and June Russ  
Willie Russ Jr.  
Edgar Sills  
Monte Stewart-Burton  
Mary Swanson  
Judy Williams  
Martin Williams  
Rolly Williams  
Vern Williams Sr.

### ***Skidegate***

Diane Brown  
Judson Brown  
Conrad Collinson  
Dempsey Collinson  
Willie Davies  
Ernie Gladstone  
Tommy Greene  
Tom Hans  
Herb Jones  
Roy Jones Sr.  
David Martynuik  
Roberta Olson  
Paul Pearson  
Vince Pearson  
Wally Pelton  
Jack Pollard  
Wally Pollard  
Norman Price  
Ed Russ  
Frank Russ  
Gary Russ  
Gladys Vandal  
Harvey Williams  
Percy Williams  
Bert Wilson  
Ernie Wilson  
Richard Wilson (Captain Gold)  
Lonnie Young

### **Companion Reports:**

- **Volume 1: Methods and Results Summary**
- **Volume 2: Seascape Unit Summary**

***Front cover photos (clockwise from top left):*** Abalone – Bart DeFreitas; Interview participant Diane Brown – Judson Brown; Ancient murrelet – Ian Jones; Salted k'aaw – Lynn Lee; Haana Edenshaw harvesting edible seaweed – Jaalen Edenshaw; China rockfish – Lynn Lee; h Interview participants Reynold and June Russ – Russ Jones.

***Back cover:*** Sunset off Skedans – Lynn Lee.

*All other photos Haida Oceans Technical Team unless noted.*

# Table of Contents

|   |           |
|---|-----------|
| Table of Contents .....   | i         |
| List of Figures .....   | iv        |
| Introduction.....   | 1         |
| <i>LIMITATIONS</i> .....  | 2         |
| <b>1. Northern Abalone.....</b>   | <b>3</b>  |
| <i>HAIDA HARVEST, USE AND STEWARDSHIP OF ABALONE</i> .....                      | 3         |
| <i>ECOLOGICAL OBSERVATIONS</i> .....  | 6         |
| <i>Abundance and Population Trends</i> .....                                    | 7         |
| <i>ABALONE DISTRIBUTION AND HARVESTING AREAS BY SEASCAPE UNIT</i> .....         | 8         |
| <i>Dixon Entrance</i> .....   | 10        |
| <i>Hecate North</i> .....   | 12        |
| <i>Gwaii Haanas</i> .....   | 12        |
| <i>West Coast</i> .....   | 16        |
| <i>Skidegate Inlet</i> .....  | 17        |
| <i>MANAGEMENT ISSUES AND SUGGESTIONS</i> .....                                  | 17        |
| <i>Cultural Value and Statements of Loss</i> .....                              | 17        |
| <i>Past Commercial Harvests</i> .....   | 17        |
| <i>Poaching</i> .....   | 18        |
| <i>Pollution and Habitat Destruction</i> .....                                  | 19        |
| <i>Areas to Protect</i> .....   | 20        |
| <i>Recommendations for Further Research</i> .....                               | 20        |
| <b>2. Clams and Cockles .....</b>   | <b>21</b> |
| <i>HAIDA HARVEST, USE AND STEWARDSHIP OF CLAMS AND COCKLES</i> .....            | 22        |
| <i>Butter Clams, Littleneck Clams and Cockles</i> .....                         | 23        |
| <i>Razor Clams</i> .....  | 24        |
| <i>Stewardship Practices</i> .....  | 24        |
| <i>ECOLOGICAL OBSERVATIONS</i> .....  | 25        |
| <i>Species and Habitat Associations</i> .....                                   | 25        |
| <i>Abundance and Populations Trends</i> .....                                   | 26        |
| <i>CLAM AND COCKLE DISTRIBUTION AND HARVESTING AREAS BY SEASCAPE UNIT</i> ..... | 27        |
| <i>Dixon Entrance and Masset Inlet</i> .....                                    | 27        |
| <i>Dixon Entrance East: North Beach Razor Clam Fishery</i> .....                | 27        |
| <i>Wash-up</i> .....  | 29        |
| <i>Masset Inlet</i> .....   | 29        |
| <i>Dixon Entrance West</i> .....  | 30        |
| <i>West Coast</i> .....   | 30        |
| <i>MANAGEMENT ISSUES AND SUGGESTIONS</i> .....                                  | 38        |
| <i>Competitive and/or Recreational Fisheries</i> .....                          | 38        |
| <i>Pollution and Habitat Destruction</i> .....                                  | 38        |
| <i>Areas to Protect</i> .....   | 40        |

|  |           |
|--|-----------|
| <b>3. Herring.....</b>   | <b>41</b> |
| <b>Haida Harvest, Use and Stewardship of Herring .....</b>                           | <b>42</b> |
| <b>K'aaw or Spawn-on-Kelp Fisheries.....</b>   | <b>43</b> |
| Early Trade and Sale of K'aaw .....  | 44        |
| Ponding and SOK Operations .....   | 45        |
| <b>Traditional Herring Fisheries.....</b>  | <b>48</b> |
| Bait Fisheries .....   | 48        |
| Food and Oil .....   | 49        |
| <b>Industrial Herring Fisheries .....</b>  | <b>49</b> |
| Bait Ponds.....  | 49        |
| Roe Herring.....   | 49        |
| Reduction.....   | 51        |
| <b>Stewardship Practices .....</b>   | <b>51</b> |
| <b>ECOLOGICAL OBSERVATIONS .....</b>   | <b>52</b> |
| <b>Spawning Populations, Patterns and Timing .....</b>                               | <b>52</b> |
| <b>Abundance and Population Trends.....</b>  | <b>53</b> |
| <b>Species and Habitat Associations.....</b>   | <b>54</b> |
| Kelp Ecosystems .....  | 57        |
| Eelgrass Meadows and Other Ecosystems.....   | 59        |
| <b>HERRING DISTRIBUTION AND HARVESTING AREAS BY SEASCAPE UNIT .....</b>              | <b>59</b> |
| <b>Dixon Entrance .....</b>  | <b>60</b> |
| Flamingo Inlet to Carpenter Bay.....   | 68        |
| Skincuttle Inlet.....  | 68        |
| Burnaby Narrows .....  | 69        |
| Juan Perez to Laskeek Bay.....   | 70        |
| <b>West Coast.....</b>   | <b>71</b> |
| <b>MANAGEMENT ISSUES AND SUGGESTIONS .....</b>                                       | <b>73</b> |
| <b>Cultural Value and Statements of Loss .....</b>                                   | <b>73</b> |
| <b>Past Commercial Harvests.....</b>   | <b>74</b> |
| <b>Areas to Protect.....</b>   | <b>75</b> |
| <b>4. Rockfish and Lingcod .....</b>   | <b>76</b> |
| <b>Haida Harvest, Use and Stewardship of Rockfish and Lingcod .....</b>              | <b>77</b> |
| <b>Food Fisheries.....</b>   | <b>78</b> |
| <b>Commercial Fisheries.....</b>   | <b>79</b> |
| <b>ECOLOGICAL OBSERVATIONS .....</b>   | <b>79</b> |
| <b>Species Associations .....</b>  | <b>80</b> |
| <b>Spawning Observations.....</b>  | <b>80</b> |
| <b>Trends .....</b>  | <b>81</b> |
| <b>ROCKFISH AND LINGCOD DISTRIBUTION AND HARVESTING AREAS BY SEASCAPE UNIT .....</b> | <b>82</b> |
| <b>Dixon Entrance .....</b>  | <b>82</b> |
| <b>Hecate North and South.....</b>   | <b>83</b> |
| <b>West Coast.....</b>   | <b>86</b> |
| South: Louis Point to Kitgoro Point .....  | 86        |
| North: Cape Knox to Louis Point .....  | 88        |
| <b>MANAGEMENT ISSUES AND SUGGESTIONS .....</b>                                       | <b>90</b> |
| <b>Areas to Protect.....</b>   | <b>92</b> |
| <b>A Haida story about respect.....</b>  | <b>94</b> |
| <b>5. Seabirds .....</b>   | <b>95</b> |
| <b>Haida Harvest, Use and Stewardship of Seabirds .....</b>                          | <b>96</b> |
| <b>Seabirds and Shorebirds.....</b>  | <b>97</b> |

|  |            |
|--|------------|
| <i>Ancient murrelet - sk'in xaana(S)/sGin xaana(S)/ sGidaana (M)</i> ..... | 97         |
| <i>Seagull Eggs</i> .....  | 98         |
| <b>Marine Waterfowl</b> .....  | <b>99</b>  |
| <i>Geese and Ducks</i> .....   | 99         |
| <b>ECOLOGICAL OBSERVATIONS</b> .....                                       | <b>100</b> |
| <b>Species Associations</b> .....  | <b>101</b> |
| <b>Trends</b> .....  | <b>101</b> |
| <b>SEABIRD DISTRIBUTION AND HARVESTING AREAS BY SEASCAPE UNIT</b> .....    | <b>102</b> |
| <b>Dixon Entrance</b> .....  | <b>103</b> |
| <b>MANAGEMENT ISSUES AND SUGGESTIONS</b> .....                             | <b>112</b> |
| <br>   |            |
| <b>6. Seaweed</b> .....  | <b>113</b> |
| <b>HAIDA HARVEST, USE AND STEWARDSHIP OF SEAWEED</b> .....                 | <b>113</b> |
| <b>Trade</b> .....   | <b>115</b> |
| <b>SEAWEED DISTRIBUTION AND HARVESTING AREAS BY SEASCAPE UNIT</b> .....    | <b>115</b> |
| <b>Dixon Entrance</b> .....  | <b>116</b> |
| <b>West Coast</b> .....  | <b>117</b> |
| <b>Skidegate Inlet</b> .....   | <b>118</b> |
| <b>Hecate North</b> .....  | <b>118</b> |
| <b>Gwaii Haanas</b> .....  | <b>119</b> |
| <b>ECOLOGICAL OBSERVATIONS</b> .....                                       | <b>119</b> |
| <b>Species Associations</b> .....  | <b>119</b> |
| <b>Trends</b> .....  | <b>119</b> |
| <b>MANAGEMENT ISSUES AND SUGGESTIONS</b> .....                             | <b>119</b> |
| <br>   |            |
| <b>Conclusions and Recommendations for Further Work</b> .....              | <b>121</b> |
| <b>Haida Ethics and Values</b> .....                                       | <b>122</b> |

## List of Figures

|  |     |
|--|-----|
| Figure 1: Map showing abalone observations and harvesting areas documented during the HMTK study. Actual harvesting locations are masked with random radial buffers..... | 9   |
| Figure 2: Photo of Bischof Islands, Juan Perez Sound. ....   | 13  |
| Figure 3: Map of Dixon Entrance East, showing clam and cockle observations and harvesting areas. ....  | 28  |
| Figure 4: Map of Dixon Entrance West, showing clam and cockle observations and harvesting areas. ...   | 31  |
| Figure 5: Map of Skidegate Inlet showing clam and cockle observations and harvesting areas. ....   | 33  |
| Figure 6: Map of Hecate North showing clam and cockle observations and harvesting areas. ....  | 34  |
| Figure 7: Map of Gwaii Haanas showing clam and cockle observations and harvesting areas. ....  | 37  |
| Figure 8: Wild <i>k'aaw</i> and SOK harvesting locations documented during the HMTK interviews. ....   | 47  |
| Figure 9: Herring fishing locations documented during the HMTK interviews.....   | 50  |
| Figure 10: Photo of a giant kelp forest on Haida Gwaii. ....   | 57  |
| Figure 11: Herring and <i>k'aaw</i> observations and harvesting areas in Dixon Entrance.....   | 60  |
| Figure 12: Herring and <i>k'aaw</i> observations and harvesting areas in Masset Inlet. ....  | 61  |
| Figure 13: Herring and <i>k'aaw</i> observations and harvesting areas in Skidegate Inlet. ....   | 64  |
| Figure 14: Herring and <i>k'aaw</i> observations and harvesting areas in Hecate North.....   | 65  |
| Figure 15: Herring and <i>k'aaw</i> observations and harvesting areas in Gwaii Haanas. ....  | 67  |
| Figure 16: Herring and <i>k'aaw</i> observations and harvesting areas on the West Coast. ....  | 72  |
| Figure 17: Rockfish and lingcod observations and harvesting areas in Dixon Entrance. ....  | 84  |
| Figure 18: Rockfish and lingcod observations and harvesting areas in Hecate North and South.....   | 85  |
| Figure 19: Rockfish and lingcod observations and harvesting areas, West Coast South. ....  | 87  |
| Figure 20: Rockfish and lingcod observations and harvesting areas, West Coast North. ....  | 88  |
| Figure 21: Rockfish and lingcod observations and harvesting areas in northeast Gwaii Haanas. ....  | 89  |
| Figure 22: Map of Dixon Entrance showing seabird observations and harvesting areas.....  | 103 |
| Figure 23: Map of Masset Inlet showing seabird observations and harvesting areas. ....   | 105 |
| Figure 24: Map of Skidegate Inlet showing seabird observations and harvesting areas. ....  | 106 |
| Figure 25: Map of Hecate North showing seabird observations and harvesting areas. ....   | 107 |
| Figure 26: Map of seabird observations and harvesting areas on the northwest coast of Graham Island.<br>.....  | 109 |
| Figure 27: Map of north Gwaii Haanas showing seabird observations and harvesting areas.....  | 110 |
| Figure 28: Map of southern Gwaii Haanas showing seabird observations and harvesting areas.....   | 111 |
| Figure 29: Map of Dixon Entrance showing seaweed harvesting areas west of Old Massett. ....  | 116 |

## Introduction

In January 2007 the Council of the Haida Nation initiated the ‘Haida Marine Traditional Knowledge Study’ (HMTKS) to document Haida culture, traditions and knowledge relating to the marine area in a manner that respects its context, richness and complexity. It was conducted by the Haida Fisheries Program and funded by Gwaii Trust Society, Fisheries and Oceans Canada through the Aboriginal and Aquatic Resource and Oceans Management (AAROM) program, and the Gordon and Betty Moore Foundation. Between February 2007 and March 2009, fifty-two interviews were conducted with Haidas from the communities of Massett and Skidegate. The interviews included short, semi-structured formats as well as longer, oral history interviews conducted over multiple sessions. Participants were chosen because of their expertise and knowledge of the marine environment; they are acknowledged here as co-authors. All interviews were audio or video recorded and fully transcribed. Information was documented on marine charts, entered into a database and linked to digitized spatial data in a GIS. The results are now available for use in Haida marine planning processes.

To complement the research conducted for the HMTK Study, we obtained permission to include a series of interviews conducted in Skidegate in 1998 by Russ Jones. The focus of these interview sessions was herring fisheries, populations and trends (see Jones 2000 and 2007).<sup>1</sup> While there were no spatial results, existing audio-recordings were transcribed and the results combined with the more recent work. A full description of the study methods, summary of the results, and participant biographies can be found in ***HMTK Volume 1: Methods and Results Summary*** (HMTK Participants *et al.*, 2011a).<sup>2</sup>

This compilation presents some of the information that was documented regarding Haida knowledge and use of six focal species or groups of species: ***Northern Abalone, Clams and Cockles, Edible Seaweed, Pacific Herring, Rockfish and Lingcod***, and ***Seabirds***. Each species chapter includes the following topics: Haida Harvest, Use and Stewardship; Ecological Observations and Trends; and Management Issues and Suggestions. Within the chapters spatial information is organized into distinct regions or “seascape units” – areas identified and defined by ecological factors – relevant to PNCIMA marine planning. More comprehensive information on the seascape units can be found in ***HMTK Volume 2: Seascape Unit Summary*** (HMTK Participants *et al.*, 2011b).<sup>3</sup>

Throughout this summary we use interview excerpts to present Haida traditional knowledge in the words of the participants. Quotations are referenced with the participant’s name, followed by the interview date. In many cases text has been edited for clarity and is occasionally distilled from multiple pages. It should be noted that Haida spellings and language included in these reports have been

---

<sup>1</sup> Jones, R. 2000. The herring fishery of Haida Gwaii: an ethical analysis. pp. 201-224 in R. Ommer and T. Pitcher (Eds). Just fish: ethics and Canadian marine fisheries. Social and Economic Papers No. 23. Institute of Social and Economic Research. Memorial University of Newfoundland.

Jones, R. 2007. Application of Haida oral history to Pacific herring management. Fishers’ knowledge in fisheries science and management. Coastal Management Sourcebooks 4. UNESCO Publishing.

<sup>2</sup> Haida Marine Traditional Knowledge Participants, J. Winbourne, and Haida Oceans Technical Team of the Haida Fisheries Program. August 2011a. Haida Marine Traditional Knowledge Study Report Volume 1: Methods and Results Summary. Council of the Haida Nation, Massett, B.C.

<sup>3</sup> Haida Marine Traditional Knowledge Participants, J. Winbourne, and Haida Oceans Technical Team of the Haida Fisheries Program. August 2011b. Haida Marine Traditional Knowledge Study Report Volume 2: Seascape Unit Summary. Council of the Haida Nation, Massett, B.C.

reviewed and corrected for dialect when possible. While this study did not consistently document Haida names of species or landscape features, we felt it was appropriate to include them when available and relevant. For quotations containing Haida words, we have attempted to have all spellings confirmed in the dialect of the speaker – either the northern or Massett dialect, or the southern or Skidegate dialect. Haida spellings for traditional place names are also provided within quotations, but gazetted equivalents are included in all other contexts (e.g. most maps and written summaries). An abbreviated glossary of Haida names for some common marine species is included at the beginning of **Volume 1**.

### **Limitations**

The information presented here should not be considered complete for four reasons: 1) there was no review of historical or ethnographic sources or notes or recordings that may have been made by others; 2) traditional knowledge is continually evolving; 3) in-depth interviews on each individual species were not conducted as part of this project; and 4) only a fraction of the Haida community could be interviewed (*i.e.* there are many other Haidas that were not consulted for their knowledge). Despite the fact that a substantial amount of information has been documented during the course of this study, we recognize that it in no way represents the totality of Haida knowledge in regards to marine species and the marine environment.

**“See everything we tell you is going to cover every bit of the shoreline, just because we’ve been travelling this land.” (Captain Gold, Mar. 2009)**

It is important to note that roughly 150 marine species were discussed in the HMTK interviews. Topics spanned ecological and cultural themes, including information on important Haida sites, stories, harvesting and stewardship practices, relationships between species, and many other types of observations. While there was an overall emphasis on finfish and shellfish, occasionally participants included information about terrestrial plants and mammals. This information was recorded, but has generally not been included in these reports, as was not covered consistently during the interviews. Terrestrial activities are only discussed in these three volumes when they have been documented in marine, estuarine or intertidal areas.

Due to the sensitivity around seaweed and abalone harvesting areas and habitat, some references to specific locations or place names, and/or spatial results for these species have not been included in this document. In addition, we have not presented any spatial information for marine mammals here. While observations about marine mammal abundances, trends and any Haida harvesting activities are noted, these topics were not consistently documented during the interviews.



# 1. Northern Abalone

Before presenting the results that were documented for Haida traditional knowledge of abalone, two limitations must be noted. First, abalone are a traditional and favourite food for many Haidas; their decline in the waters of Haida Gwaii is perceived as a profound loss. There is both sadness and resentment in the Haida communities that make the topic extremely sensitive for discussion and documentation, with a particular reluctance to share abalone distribution information. Second, most participants have not harvested abalone for many years. As a result, it is likely that abalone information is under-represented in the study results.

**“That’s one in the olden days we used to eat, abalone, and... it was just part of our diet.” (Roberta Olson, Apr. 2007)**

Did you notice that the abalone spots were limited, what I told you? ...the reason for that is because those abalone spots I knew of were just gone then... See a lot of the knowledge I have about abalone spots too is just pointed out to me by like [an elder fisherman] saying, ‘Oh, yeah... they used to be there, they used to be there.’ (Ed Russ, Jul. 2008)

Because there is such sensitivity around abalone, no detailed maps of abalone observations and harvesting areas have been included here. The one map that is included is presented with a scale and masking technique intended to disguise specific areas, but indicate Haida knowledge and use. In addition, throughout the text place names have been removed to protect specific locations.

## ***Haida Harvest, Use and Stewardship of Abalone***

Most Haidas have harvested abalone much less frequently in recent decades than in years past. They also tended to harvest fewer abalone as they saw the population begin to decline, most often getting only enough for a meal instead of quantities that could be preserved or traded. Because of this, much of the information in this section is presented in the past tense. However, abalone are dearly missed and people hope for a time in the future when they may resume their traditional harvesting activities.

... [my grandfather] taught us a lot. Yeah. I have very fond memories of him, fishing with him... you know, I must have really enjoyed it. And harvesting food too—abalone, urchins, mussels, scallops—we harvested all of that when we were young. Yeah... he taught us a lot ... if he didn’t show us that... I probably wouldn’t have such an interest in the ocean. But he was the one that showed us everything about the ocean. (David Martynuik, Nov. 2008)

Underlying most traditional Haida harvesting practices, no matter what the species, is an ancient and intimate relationship with the ocean and a deep respect of the plants and animals that live within. This is manifested in strict rules about not making fun of anything you harvest, as well as never taking more than you need. Many participants described Haida values of respect and moderation when asked about rules learned from parents and grandparents.



**“You were taught not to make fun of any kind of seafood. No matter what came from the sea, we had to respect it.” (Norman Price, May 2007)**

... a lot of times we only took half a sack and...kept that for while we were moving back and forth, doing our gathering, food-gathering there... just so that it... well, grandmother used to say, 'Only take enough for what you need. You don't need to take anymore than that.' Hence, they were very concerned about preserving things like that, making sure that we had enough. I know grandmother ... always told us, 'Never get too greedy about that. If you look after it, it will always be there.' (Herb Jones, Mar. 2007)

They used to pick around here; everything was there, chitons, *k'yuu* [butter clams]. Everything thing was there, all the shellfish. And they used to get all the clams here, at Kiusta... Yeah, abalone – they used to get that at low tide too... and they used to get lots on that island out there, *Gwaay T'uuwans*... on the other side. Gee, it was just loaded! People used to just get enough to eat; they never take more than what they want. (Mary Swanson, May 2007)

***"Tliisdluy gudang kilagangs isdaa; just take what you need."* (Mary Swanson, May 2007)**

The Haida harvest of abalone may occur at any time of the year. More important than particular seasons are suitable weather conditions and extreme low tides, as the traditional Haida practice is to hand-pick or spear on the big tides, "That was the only time we went to get it was when the tide was down low enough to get it—like a 24-foot high to a zero," (Oliver Bell, Dec. 2008). "I use a spear. My husband made me a beautiful 14-foot spear. I could get *guuding.ngaay* [red sea urchins] I could get abalone with it. I taught quite a few people how to spear with it..." (Diane Brown, May 2007).

June Russ said she used to harvest abalone by prying them off rocks with a sharp knife at low tide. Rolly and Martin Williams both talked about how they were taught to harvest abalone around Old Massett.

We used to just go pick what was above... the water line, because they'd be crawling around in the kelp. And we wouldn't touch anything else that's in the water. I mean, we didn't dive for them... yeah, that's the way we did it up here. There used to be abalone all the way right from here right out to Langara and anywhere you were out there, if the tide was down, you'd find some—they would be just crawling around. (Martin Williams, Feb. 2009)

Roberta Olson remembers gathering abalone along with sea urchins and rock scallops.



**Roberta Olson**

**"On the backside of Hotspring Island, [urchins were] easy to get to because we almost lived on Hotspring Island because *Chinaay* Albert...put claim to that years ago when we were young. So we'd go there as much as we could in the wintertime and the summer. But going back to the backside of the island, there's rock scallops and oh, rock scallops all along. That's one in the olden days we used to eat. ... [We ate abalone] off that part and over here...and...yeah, rock scallops were where the abalone were. And of course the *guuding.ngaay* [red sea urchins] was all there as well." (Roberta Olson, Apr. 2007)**

As mentioned, abalone is often enjoyed raw, or just lightly cooked.

Most seafood...was cooked just a few minutes. If you cooked it any longer, it would turn like rubber. All seafood was like that. Like if you make clam chowder out of fresh clams? You cut it up and your potatoes are boiling, you throw your clams in and as soon as the first bubble comes up, you take it off the stove. That way they claim it was nice and tender; if you boil it, they get like rubber. That's the way all seafood is cooked. Seafood is all tender when it's raw ... Most everything from the sea we used to eat it raw—nice and tender and tasty. When you cook it all the taste comes out of it. It gets... what the Indians call *kunxuu*; it means there's no taste. (Norman Price, May 2007)

People most often spoke about just getting enough abalone for fresh food or a meal while harvesting other species, "... when I fished commercially, whether it was chum fishing, ...pink fishing ...when we had some down time and the tide was low, I'd go and look for abalone and harvest them—just for use at that point in time," (Gary Russ, Mar. 2007). While this seems to be a practice rooted in tradition, it was likely reinforced at least in part by the steady decline of abalone in more recent times. Older participants remembered their parents preserving larger quantities of abalone for storage and for trade. Ernie Wilson's grandmother used to put abalone on sticks and smoke-dry it to trade with people on the mainland.

[We used to] look for whatever we can pick up ... if it's possible, we used to get quite a few abalone. Granny used to cook it and string it up to bring to Skeena to sell, yeah. Used to do alright from it. Yeah... Lot of times they traded for 'as ... soapberries and [eulachon] grease... *taw*. That's what the main things they used to trade, yeah. (Ernie Wilson, Aug. 2008).

Reynold Russ also remembers people canning abalone.

...and that's when I seen...you know, when they were canning [abalone]. Oh, this was in Langara. When mum was canning it, she'd slice it real thin and...put it in cans, maybe about four or five abalone would fill a quart jar, eh? ...and that was our... winter food, and it was tasty! Tastes... I don't know. I [could] eat a whole jar myself if I had a chance to. Yeah, that's how tasty it was. (Reynold Russ, Jun. 2007)

Roy Jones Sr. said that while people used to dry and can abalone, it was never salted, as salting made it tough. Both Reynold Russ and his wife June witnessed people drying abalone years ago; "Yeah, abalone they were sliced real...you know, not that thin. But they'd lay it out on a rack...they dried it, yeah. And it was tender..." (Reynold Russ, Jun. 2007).

A younger participant, Tommy Greene, said he used to harvest abalone when scuba diving, also many years ago. He had these observations from working on abalone dive surveys:

There's one starfish there that you cut a leg off and you just go and put it right by the end of it and the ab will go nuts trying to get away and you just take it. (chuckling) ... yeah, they twist real hard trying to get away; they go nuts. You wouldn't think so, something with no brain, but I guess they have a nervous system that senses that. Yeah. Then you just pick them up and then measure them, tag them; that's what we were doing. But ... yeah, they move along, travel too; you just pick them up. No, I didn't like spearing them. But we didn't... you know, even then we didn't get very many to eat. I don't know; it's just one of those things we never really loaded up on. To ourselves it was sort of like a treat, and we took care of it. But then they all got wiped out. (Tommy Greene, Oct. 2008)

During the HMTK interviews we were told on more than one occasion that Haidas have experimented with transplanting abalone in past years.

...well, they say abalone don't grow in [Skidegate] Inlet—they won't grow in this inlet. There's been over numerous years guys dropping abalone in this inlet, that I know of. Like Uncle Roy and them ...said they dropped it in the late '70s. You know, not ...just a couple; they did, you know, quite a few just to try... (Ed Russ, Jul. 2008)

One participant, Captain Gold, said that he once transplanted about 30 abalone from Hotsprings to Skidegate Inlet in the mid-1970s; no one could confirm whether the transplanted abalone have established a population there.

### ***Ecological Observations***

Because the Haida Marine Traditional Knowledge interviews attempted to cover such a wide range of species and topics, we documented relatively little ecological information about abalone. It is important to point out that there is in all likelihood a vast amount of this type of information held in the Haida communities; there simply was not time in the interviews to cover each topic in that level of detail. Further research could be very beneficial to all of the topics touched on in this section.

In discussions of where abalone might be found or harvested, species associations with scallops, sea urchins, seaweed and kelp were identified by many participants. Abalone were often mentioned in conjunction with harvesting clams, cockles, mussels, halibut, and rockfish. It was pointed out that they tend to be found along shorelines, but not up inlets, and very often found in kelp patches; "We used to pull the kelp up and they'd be hanging on the kelp. Stuck to the kelp and I'd just throw it aboard," (June Russ, Jul. 2007). There was more than one participant that suggested they are witnessing changes in the kelp beds, which may be influencing abalone distribution and/or abundance.

Well, there's like I said, no abs... and ... the kelp beds seem to be changing too. Like I always keep an eye on kelp every time we go to do archaeology, note where they are, and they seem to disappear and pop up in another spot—which I've never seen before. I don't know why it would be like that. (Tommy Greene, Oct. 2008)

Only one participant had observations of abalone reproduction; he said it was sometime between April and June in the 1950s that he saw these accumulations of abalone that appeared to be spawning.

... we went down in June, I think, to Hotspring—big tide at that time. We ran down the back end there, I know about this place. That's where the abalone was. Boy! That's just when they were spawning; they were mating—eight, nine of them. You just grab the bottom one, work it loose, here you got eight, nine! We got 500 one tide. Peggy was getting up to here. 'Hey, Peggy you better quit!' 'No, not yet!' she said. First time she's seen so many! (Ernie Wilson, Aug. 2008)



**"Yeah, five or six in a pile, sometimes more than that. And they're mating there ...don't ask me how they could get so high!"  
(Ernie Wilson, Mar. 2007)**

During the Skidegate verification sessions, Diane Brown mentioned that Jack Pollard once told her that he saw abalone travelling. He was near *Jiinang.nga* [Government Creek] when he saw a lot of abalone moving at a really fast pace (Jun. 2010).

One further ecological observation is that abalone don't suffer from red tide – only shellfish that “dry up” in the intertidal zone experience red tide – abalone are too deep (Ernie Wilson, Aug. 2008). Captain Gold had the same observation about the depths at which abalone are usually found.

Abs don't like to dry up. They like to be just below the extreme low tide ... all these [polygons] here are where the abs would be because it's in the... active low water. You know what I mean? Because at times, these do dry up, but that's when it's a real low tide. And then you can go along in a boat and pick them right off the rock. (chuckling) That's the way it used to be. Not anymore. (Captain Gold, Mar. 2009)

### ***Abundance and Population Trends***

At this point it is already abundantly clear that the abalone which used to be widely distributed throughout the islands of Haida Gwaii are no longer found in many of their usual places.

We've explored all over Kunga, this island, on our boat. And there's just seafood all over there; there *used* to be. Now of course there's no abalone. Even...when we last started going, even the sea urchins were getting scarce. (Diane Brown, May 2007)

... there was never a limit or anything; you just went to the beach and you got what you needed. Nowadays, you can't even barely get anything, right? But they've noticed a big depletion in like the abalone, the herring, the salmon... (Wally Pelton, Oct. 2008)

... we did ab [survey] diving, I don't know, so many areas when we did that and there's no abs. Like what the biologists thought would be really primo ab territory? Nothing. (Tommy Greene, Oct. 2008)

The dramatic decline in abalone abundance that Haidas have witnessed over the last thirty years appears to be widespread and common to most areas of Haida Gwaii. Even the formerly productive areas of the south have experienced this decline.

There's no more abalone anywhere down south, even like ten years ago there was lots here and there—like, little pockets of it—and then when you go back the next year they're all gone. Just like...not even one left. In places, like on House Island there's none. There used to be lots...all in here. And then on Ramsay, there were lots on these reefs here; they're all gone. Here, they're all gone. There was some down further south around Burnaby; now there's no more. No more there. Rock scallops are pretty scarce, too. Well, I'd see some but...when you think of how old they are I just couldn't gather them anymore because there were so few. Like twenty years ago, you'd think nothing of knocking off three or four and getting enough to eat, but I think twice now. (Diane Brown, May 2007)

Yeah, we dove ... all along in here—Louscoone, Flamingo—there used to be a lot of abs in Louscoone. I remember from herring fishing, going out and getting feeds [1980s]. We went back and at those spots there's nothing. (Tommy Greene, Oct. 2008)

The decline of abalone is often attributed to intensive commercial harvesting in the past and continued poaching since the commercial harvests were shut down in 1990. The majority of our participants said they haven't harvested abalone for at least ten to fifteen years, "... I don't even get a feed any more... after seeing how few there are," (Tommy Greene, Oct., 2008); "No, not when it's restricted, because...it's depleted. I think from after they commercialized everything, we've lost all our abalone," (Margaret Edgars, May 2007).

"In all the years I went down it was good; you could go get a meal anywhere... at low water, you could grab them... that was in the eighties, eh? Late...in the eighties. ... Yeah, because... after that I seen it drop, drop, drop, drop. Like, you know, you could go to an island where you used to go get a meal for everybody and there was nothing. Little guys. No one took the little ones. But you noticed the years after it just seemed to all go." (Rolly Williams, Feb. 2009)



**Rolly Williams**

Abalone numbers do not seem to be recovering despite fishery closures.

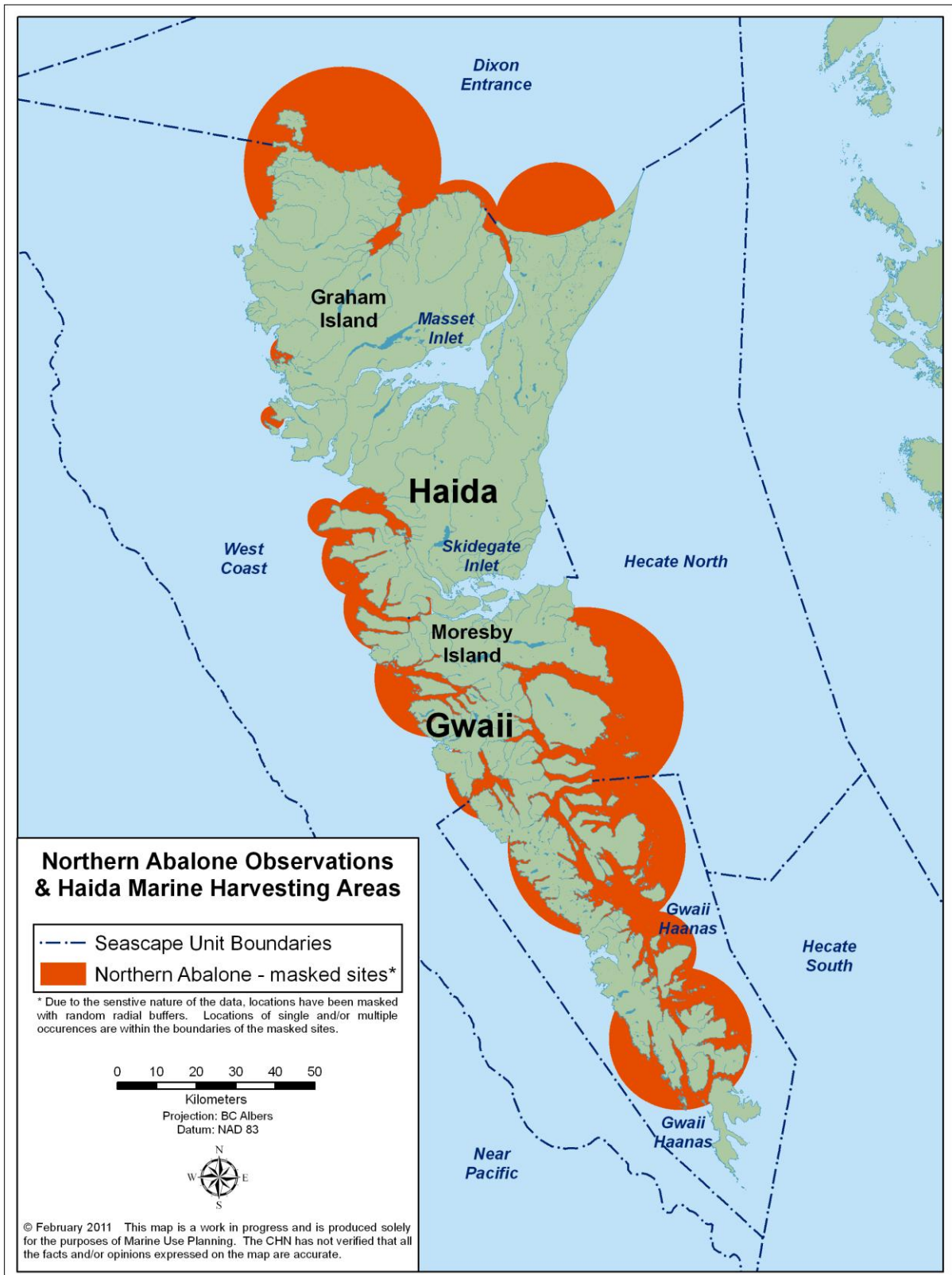
... I've looked for [abalone] and the numbers ... they seem to be continuing to go down. There's a few spots where you'll find them but ... not like it used to be. Even ... well, I know the commercial fishery that took place where it, you know, really wiped them out was quite a few years ago, and that was before I even was spending any time down there, but even in my time I've seen the numbers still... going down. So I don't know... you hear stories about them being poached all the time. So I don't know if it's that or if they're just not repopulating themselves. I don't know, but there's something going on there, that's causing them to not... come back. (Ernie Gladstone, Nov. 2008)

### ***Abalone Distribution and Harvesting Areas by Seascape Unit***

The many islands, reefs and rocky islets that make up Haida Gwaii can provide a wealth of habitat for a species like Northern Abalone. Many Haidas remember a time when abalone could be found throughout Haida Gwaii; "... wherever there's a reef there used to be lots of abalone..." (Ernie Wilson, Mar. 2007).

Figure 1 shows some of the abalone observations and harvesting areas identified during the Haida Marine Traditional Knowledge Study interviews. Due to the sensitive nature of the spatial information, actual locations have been masked with random radial buffers. Locations of single and/or multiple occurrences may be within the boundaries of the masked areas.

**"[Abalone] can be anywhere too, eh? Anywhere in the shallows, but what I've noticed when I've been diving is—we used to dive and get a feed of abalone—but now... I don't see enough to pick." (Monte Stewart-Burton, May 2007)**



**Figure 1: Map showing abalone observations and harvesting areas documented during the HMTK study. Actual harvesting locations are masked with random radial buffers.**

The historic widespread distribution of abalone meant that they have been a widely available and reliable food source for Haidas for generations. While we have documented evidence of abalone being preserved on a larger scale for storage and trade, most commonly abalone tend to be harvested at convenient places and are taken in small quantities as a source of fresh food while harvesting a variety of other species. This fact has necessarily influenced the distribution of abalone documented by this study – we have a higher representation and more knowledge documented about abalone habitat located in proximity to other harvesting areas, close to camps and travel routes, and in locations where it is safe and easy to harvest; fewer locations were identified on the west coast where conditions can be rougher and sites are more exposed. Where possible, we have tried to indicate areas that were known to be particularly productive or rich habitats, but this is one topic that would benefit greatly from future research.

In this section, abalone distribution and harvesting information has been organized into the relevant Seascape Units used for marine planning by the Haida Marine Work Group.

### ***Dixon Entrance***

Some of the areas mentioned as formerly good for abalone were around Langara Island and along the north shore of Graham Island between Cape Knox and Striae Island. Many Haida elders remember harvesting abalone while staying at Langara (North) Island years ago. Francis Ingram used to go to Langara as a child for the summer seasons; abalone was part of what they harvested and lived on while there, “The whole summer right from probably April until September. We stayed down there, food-fished ... seaweed, mussels, abalone—just about everything you can get down there—all our halibut, all our salmon,” (Francis Ingram, Nov. 2008).

Percy Williams mentioned getting abalone in the 1930s and 1940s nearby, “...in behind Henslung Bay... behind that island, around in there,” along with mussels, chitons, and sea urchins, “Everything in that little bay,” (Percy Williams, Sept. 2008). Tom Hans, Edgar Sills and John Bennett also shared memories of harvesting and eating the plentiful abalone in the waters near Langara. One small island in particular was often identified as an important abalone harvesting area.

... abalone beds were pretty well all over the place. You know, not much but enough. At ... [location]? Right on the outside, this rock right here? We used to pick them at low tide, zero tides. We’d go get enough to eat.... But this whole beach here...you can get enough, more than enough, right there. (Robin Brown, Apr. 2007)

Unfortunately, most of these experiences now only exist in memories as the abalone have all but disappeared from sites around Langara.

I remember where the abalone sites were ... right in here. Now we can’t even get any. It’s just sad. We used to get them by big sackfulls [by Langara]. Yeah. Now we can’t even get anything. (Margaret Edgars, May 2007)

**“There used to be lots of abalone, but you never get it any more ... they cleaned it out.” (Claude Jones, May 2007)**

Apart from sites around Langara and on nearby islands, there were also plenty of abalone beds along the north coast of Graham Island. Traditional Haida village sites such as Kiusta were often located in very close proximity to some of these harvesting areas.



... abalone beds ... where I remember I used to get them was right in here, all Langara, where the reserves are on the island. Kiusta, right out in front of Kiusta is an abalone bed there. ... Naden...right here—there's a little island right here ... where we picked seaweed. There used to be lots of abalone there until the commercial sea urchin divers came through and cleaned it all out. (Rolly Williams, Mar. 2007)

Some other areas mentioned as having a lot of abalone were Cape Edenshaw, between Mary Point and Jorey Point, the Mazarredo Islands and also Nankivell Point. Closer to the Massett townsite, a number of important abalone harvesting areas were identified by participants; Striae Island was one such place.

All along here used to be abalone; people used to gather it. It's called Striae Island. ... this little island right here is called Hidden Island... we used to get abalone ... and devilfish... Right there, like that, and all the way down. That's where we used to gather when we were allowed to gather it. But we only used to take enough for like a meal, for two families. Never got greedy. (Rolly Williams, Mar. 2007)

Reynold and June Russ used to gather abalone at Striae Island also. The last time they were there was in the 1950s, "... it used to dry up and we used to try to poke the abalone off the rocks... Gee, they were just tight together like this... You had your pick! Leave the small ones alone and get the big ones," (June Russ, Jul. 2007). Reynold and June also told us about another productive abalone area very close to Massett where they could harvest abalone on the lowest tides.

And the biggest butter clam bed is on the north beach of Massett...that's the biggest butter clam beach that I know of. You can get butter clams. You can get cockles... and you can get octopus... and all kinds of mussels and we used to get ...abalone there, but this was just on zero tides ... (Reynold and June Russ, Jul. 2007)



*Reynold and June Russ*

Reynold and June said that the whole area from Entry Point to Chown was equally productive, "...from Entry Point to Chown Point, about halfway out, you could get a lot of seafood... anything you want..." (Reynold Russ, Jul. 2007). A number of elders talked about abalone washing up along with scallops, clams and cockles on North Beach during winter storm events.

...Yakan Point...that's another place...you can get...rock cod and... you can get chitons. If the tide's big enough you can get sea urchins. And ...you can also get abalone there, too...twice now that's happened, in the winter months... one time we were out there with Adelia and Uncle David, June and myself ... picking below high water and ...of course you know, there was a big pile of kelp. So I pushed the kelp aside and I seen one abalone sticking ... I'm not sure if you've seen the peat moss bags? You know, they're about that big... and anyhow... we started using sticks and pushing the kelp away and talk about abalone! All de-shelled. No shells on them ... so we were busy. They would be picking it and Dave and I would be running it back to the car, eh? Filling up the peat moss bag. And we filled it right up plus a five gallon can. Oh, we got lots of abalone... and another time Harvey and I was out there and ... you know, there was lots of butter clams on the beach. I thought of the abalone, so I walked over and... I raked it and didn't get very much but there was still lots there yet. Still lots, you know, I got quite a bit. (Reynold Russ, Jul. 2007)

### **Hecate North**

Heading south from Sandspit down the east coast of Moresby Island, many different areas were identified as being very good for abalone, very plentiful. Traditionally, families from Skidegate would move south in the spring to places like Cumshewa and Selwyn Inlets to harvest seafood; abalone was one of the staples harvested in this area. Tom Hans talked about getting seaweed, halibut and abalone just offshore from Cumshewa and Skedans. Norman Price remembers wintering in Cumshewa where his family had a longhouse and they would fish and gather seafood:

...we built a longhouse here. And there was a lot of seafood all the way along here. You didn't have to go very far for seafood, just walk from the cabin and you got seafood... abalone, sea urchins... chitons, too (Norman Price, May 2007)

...I can't remember exactly what year it was we started... driving to Cumshewa and launching the boat and going all around in Cumshewa Inlet ... going to Cumshewa village for clams and *guuding.ngaay* [red sea urchins] and abalone. [Father would] also troll for coho and... in there.... there's a spit that dries up. Yeah, so we'd get clams around here ...and we'd get *guuding.ngaay* and abalone out on the reefs out here. ... And then we started venturing further and further, like from Cumshewa to Skedans and staying at Skedans, and harvesting ... clams and abalone and... sea urchins. (Diane Brown, May 2007)

Many areas around Louise Island were also identified as having good abalone habitat. Limestone Island, Vertical Point, Louise Narrows and Rockfish Harbour were consistently said to be productive areas for harvesting. Ernie Wilson talked about trapping in Louise Narrows when he was much younger, and said there used to be thick patches of abalone in some places. This observation was made in the 1960s by Percy Williams, "Biggest abundance of abalone I ever saw on the island was right here. For area, little area, just loaded with abalone—right in there, behind the island. I don't know if it's still like that," (Percy Williams, Sept. 2008). The location referred to by Percy was mapped not far from Rockfish Harbour. A more recent observation suggests that this was still a productive area for abalone, thirty years later:

... I went for abalone in here—this was probably twenty years ago now—[near] Rockfish Harbour? And this was in the fall because I was out there hunting actually. But I went and got a bunch of abalone and there was a whole bunch of abalone right along the shore. And then I went back there again the following spring and there was none... (Ernie Gladstone, Nov. 2008)

There is little evidence of this former abundance remaining today.

And of course out here was abalone, abalone. South Low and Low Island also. Real rich with abalone one time. Wiped out in the seventies. Still never recovered. *Tah!* That place used to be so rich, you stop on one little rock and if you wanted to you could pick up 80 in one time. Just for the heck of it. And still leave lots. (Captain Gold, Mar. 2009)

### **Gwaii Haanas**

Many of the areas visited by Haidas in the southern parts of the islands are now encompassed by Gwaii Haanas National Park and Haida Heritage Site. This area is extremely rich for

"[There was] so much abalone it didn't matter where you stop, you'd get a feed of abalone. When we were seal hunting, we'd run out of bread, so we used abalone for bread. There's so much around." (Roy Jones Sr., Apr. 2007)

many types of seafoods. Some of the sites mentioned most consistently for abalone in the park are near Hotspring Island, Murchison Island, Marco Island and the Bischof Islands.



*Photo: Lynn Lee*

“Okay, lots of shellfish in here, on the Bischofs— abalone, clams, scallops... circle the whole Bischofs. Yeah. All around there there’s a bit of everything in along the shore here, too... because like all mussels, too, that would be the other one that they’re...Yeah, just around to about that point there...is as far as I went. Yeah. It’s a good place.” (Ed Russ, Jul. 2008)

**Figure 2: Photo of Bischof Islands, Juan Perez Sound.**

Elder Percy Williams used to gather abalone and other shellfish in the area in the 1930s.

Piles of abalone here. Hotspring and Murchison Island and...there’s a lake in there and there’s lots of abalone and clams in there ... Lots of abalone here, Bischof. All the way around... There’s clams; there’s a lot of clams. There’s a sandy beach up here; a lot of clams there... There’s abalone here, too. Behind the island there... Not a lot, but you can get enough to eat. (Percy Williams, Jul. 2008)

Going to Hotspring and enjoying a feed of abalone while there is an experience cherished by many Haidas.

...the cohos would be coming in in August when we were down there hunting so we got a few...coho, but basically we were there in the month of August for the deer hunting. We’d only take about ten days, and then we’d have everything we wanted and then [we’d go] back because grandfather had to go trolling...to...make some money...but we always took that time out. [Of] course it was always planned in with the big tides too, because then we could go out and get a bit of abalone and that...before the restrictions came on...we travelled all over down there. We’d end up even at Hotspring and we’d gather enough for a feed—we’d always have a little sack hanging off the side of the boat—eat it whenever we wanted. (Herb Jones, Mar. 2007)

*Leah: And did you guys collect any seafood while you were there [Hotspring]?*

Diane: ...yes, of course, wherever you went. If the tide was good...you collected. And that would be abalone and mussels and sometimes they would bring that up to the beach and after you were bathing, everybody would feast on abalone.

*Leah: Did you eat it just raw?*

Diane: Yeah, eat it raw and then they would cook some. And just throw them in the shell into the fire. Yeah, that would be pretty good. (Diane Brown, interviewed by Leah Young, Apr. 2007)

Many specific areas around the Lost Islands, Tanu, Richardson Island, Darwin Sound, Shuttle Island, Lyell Island and Thurston Harbour were also mentioned as having rich abalone habitat.

Oh, yeah, Tanu... there's reefs all over out there. There used to be lots of food. Now, I don't know; I haven't been there for a long time but all along these reefs here... just like *guuding.ngaay* [red sea urchins] right in front of the village. And there's reefs where we used to be able to get abalone and rock scallops, but I don't know about any more. (Diane Brown, May 2007)

Percy Williams harvested abalone for food while seal hunting near Murchison Point, "Yeah, there's abalone here... Right there. They're like this—little things. Real lots of them. Right in here in this shallow spot..." (Sept. 2008). While Percy's observation was from his youth, some participants spoke of abundant abalone near this area even in more recent times; "...and of course abalone all through there... When was it? Early eighties they overfished the abalone? It was just before that. Around 1980 I would guess..." (Wally Pollard, Jul. 2008).

Diane Brown said she remembers "just hundreds of abalone" in the surrounding areas (May 2007). Unfortunately, like the areas formerly harvested around Langara Island, this abundance of abalone may now be a thing of the past.

Yeah. This area's really good for... *used* to be really good for abalone and scallops too—this whole Murchison Narrows area. And then this... right at the mouth of this little lagoon too... just two years ago. I had my kids down there and we were just drifting around here at low tide, just you know, showing them all the stuff... and I never saw not even one abalone in there. (Ernie Gladstone, Nov. 2008)

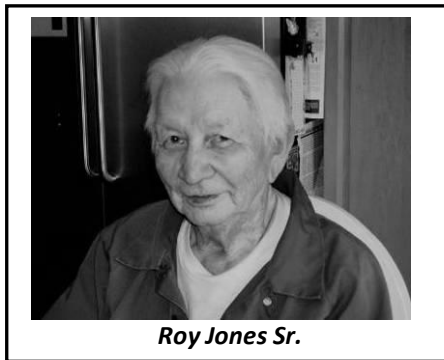
And here's the Hotsprings... all along here there used to be abalone and urchins galore and we used to stop in this one here—just Marco it's called. Marco we used to stop to... pick abalone for our food fish, years ago, and there's nothing there now; it's cleaned out. (Robin Brown, Apr. 2007)

Further south still, Burnaby Narrows was another area Haida families often went to gather food. According to many of the HMTK participants abalone could be harvested along the shores from north of Dolomite Point to Burnaby Narrows, all around Alder Island, Huxley Island and Wanderer Island, and generally throughout the surrounding area; "There's so much there you don't even have to go anywhere

else.” (Roy Jones Sr., Apr. 2007). Many families would stay in the area for months on end, harvesting a wide variety of species.

*K’iid*, we call it, Burnaby Narrows. *K’iid*. Just about everything there—there’s mussels, there’s abalone, sea urchins, clams—millions of clams there. If you wanted cod, you just paddled offshore a little ways and got cod. Food in abundance, lots. (Percy Williams, Oct. 2008)

Diane Brown talked about the same experience—staying at Burnaby Narrows in the spring and getting abalone, along with other shellfish, in the area. Lonnie Young also remembered going to Burnaby Narrows with his family to food-gather, “... guys would go out fishing for halibut, we’d go along the shore, get abalone, clams, smoke the clams,” (Apr. 2007). He said that most often the abalone were “...just for eating...just sustenance for that day, type thing...” (Lonnie Young, Apr. 2007). But like stories from the northern part of the islands, some of our older participants remember harvesting and preserving larger quantities of abalone. Sometimes surplus abalone were traded.



“...first part of March, sometimes last part of February—we’d move down there to wait for herring because we can do everything else. My mum used to... can some abalone. That’s what... abalone and halibut we’d gather first. Abalone, and my mum used to dry it in long strings. You know, put a string through them... and dry it that way. You know, when you were ready to eat it, you just... soak it for awhile.” (Roy Jones Sr., Apr. 2007)

Other gathering areas included the Copper Islands, Bolkus Island, and from Jedway to Bush Rock. Few of our participants had extensive experience fishing or gathering on the very southern end of Haida Gwaii, however Percy Williams told us about getting abalone in places such as Louscoone Inlet, Flamingo Inlet and Carpenter Bay in the past. His experiences spanned the 1930s to 1970s, “Yeah. Flamingo Inlet in here. Real huge abalone in that. Real big ones... Mostly around this area. ... I don’t know if they’re there still; there must be a few around there,” (Percy Williams, Jul. 2008). According to Tommy Greene and Ernie Gladstone – two of our younger study participants – there were also productive abalone areas in Houston Stewart Channel. This observation comes from Gaudin Passage:

... when I first started the [dive] surveys it was loaded with abs. [Now] nothing. Nothing. ... But now diving, going doing surveys through there there’s nothing; no abs at all. This [was] ... when they first started putting that longhouse in? On Ellen Island? I don’t know what year that was. So I helped put that in and you could see the abs all over, like the water went out... it didn’t even have to be a real low water. And then we did surveys through there and they’re gone. I don’t know what’s happening. ... like we searched all the primo spots where the biologists thought would be abs—where there’s kelps... kelp growing—kelp forests, and there would be nothing. Because they like kelp. Ah, I think they got poached... (Tommy Greene, Oct. 2008)

Captain Gold and Bert Wilson – brothers who often fish and gather around South Moresby and Kunghit – mentioned Howe Bay, Luxana Bay, High Island, Heater Harbour, Rose Harbour and Woodruff Bay as some southern areas where they would consistently find abalone, “... right from the middle of Treat Bay on the east side all the ways out to Bowles, Prevost Point, is ... one heavy, rich food area—lots of abs,” (Captain Gold and Bert Wilson, Mar. 2009). They also mentioned *Sang Gwaay*, Cape St. James and the Kerouard Islands.

### **West Coast**

Despite generally rougher conditions on the West Coast of Haida Gwaii, participants nonetheless named several sites known to be good for harvesting abalone. Heading down from the northwest tip of Graham Island, many named Lepas Bay as the first place they would find abalone.

Yeah, Kiusta, all along the bank here, right here... and then we used to go on the other side, in Lepas Bay; we used to be able to get some...right out here... and right out here. I don't know what they call this but we used to...go across there and get mussels and abalone and that for Rediscovery when we first started. (Rolly Williams, Mar. 2007)

Reynold and June Russ also used to get chitons, butter clams, abalone and sea urchins at Lepas Bay. Port Louis was identified as another West Coast location that can be very productive for abalone.

... I was up here on a couple of other trips too, just on my little boat, and we stayed in this little bay where that lodge is now ... The Outpost or whatever it is—that ... sports lodge? ... I just had my little boat, so we mostly just explored around in Port Louis. But I remember ... and there's a lot of abalone in there... (Ernie Gladstone, Nov. 2008)

During the Old Massett verification sessions, it was noted that the abalone have been harvested out of Port Louis now (Jun. 2010). Further south, Percy Williams mentioned getting some abalone by Hippa Island and several people told us about harvesting abalone at locations between Rennell Sound and Buck Point. Our oldest participant, Ernie Wilson, used to get abalone while fishing salmon in Seal Inlet on the west coast.

Rennell Sound, yeah. This is Seal Inlet... we used to have camp right in here. Yeah, our people used to camp there, to fish all along...right along here... them days, used to be lots of abalone here on the points. [We would get] ... just enough to eat, that's all. Yeah, sometimes we'd just use a spear, pick them up and chew on it... (Percy Williams, Mar. 2007)

Frank Russ said his brother-in-law reported getting abalone and rock scallops in Shields Bay in the past, but that the abalone are very sparse in that area now, “No, we never got any out of there the last time we were there... we didn't even see much—see some small ones but nothing worth taking,” (Frank Russ, Dec. 2008).

Several participants mentioned harvesting abalone for food in Van Inlet, Dawson Harbour, and at Downie Island in the West Narrows of Skidegate Channel in the past. Many people could not give recent observations of abalone in these areas, as they said they hadn't harvested any since the 1990 closure, and so had for the most part stopped looking for them. However, there were memories of previous harvests in other areas of Rennell Sound, in Skidegate Channel, near Buck Channel and near Skidegate Point.

### ***Skidegate Inlet***

The HMTK study documented very little information on abalone within Skidegate Inlet. Several participants mentioned that there used to be abalone at the West Narrows, Alliford Bay, *Sgaay.yas*, Grassy Island and other islands in Skidegate Inlet. As previously mentioned, some transplanting was done in this area in the mid-1970s, but we were not able to confirm whether the transplanted abalone have established a population.

### ***Management Issues and Suggestions***

What was once a common food source around the waters of Haida Gwaii has now declined to the extent that some of the younger generations of Haida have never tasted abalone. It is important to communicate how significant this loss is in Haida culture.

**“Yeah, that was my favourite dish, was abalone. [I like it fresh] ... sometimes raw, yeah, I like it raw and I like it fried-up.”  
(Roy Jones Sr., Apr. 2007)**

### ***Cultural Value and Statements of Loss***

Many elders interviewed here said it used to be their favourite food. Our older participants were accustomed to being able to get abalone when they wanted it, and so the loss is perhaps most painful to them.

[It] seems to have struck everybody terribly that they're gone. It's just horrible. In my twenty-eight years as a community health rep, when older people were getting ready to move on to the next journey, they always wished for abalone. And it never hit me harder than when my father just died in March and the last thing he asked for was abalone...and we can't get it to them... Yeah, I would've liked to...say, 'Oh, no problem. I'll send somebody out and get one for you,' but you can't. (Diane Brown, May 2007)

That's an interesting subject, is abalone. That was traditional food, not only for the Haida people, but for you know, up and down, the coastal people ... and because of the way it was managed by DFO, it was over-fished, and you know, that's taken away from the aboriginal people—our traditional food ... I could remember when you know, we would take maybe twenty at the most, and mum would slice it and can it. And that was part of what they did when we all moved to Langara. And it being a traditional food, but today, we get even one abalone, we pay a heavy fine for it... so you know, that was taken away from the aboriginal people. (Reynold Russ, Jun. 2007)

The loss is both nutritional and socio-cultural, as in many First Nations communities, traditional knowledge is passed on to the younger generations through shared experience; opportunities to teach youth traditional methods of finding, harvesting and preparing abalone do not currently exist. To date, no valuation of the loss of abalone to First Nations has been attempted. Although it is insufficient to describe this loss solely in financial terms, both the socio-cultural and economic costs associated with the loss of abalone need to be considered in management efforts.

### ***Past Commercial Harvests***

While the decline of abalone is possibly affected by other factors, amongst the Haida communities it is most often attributed to large harvests in the commercial fishery.

Fisheries don't seem to know when to shut down anything. When they open anything for commercial they don't study it long enough, I guess. I don't know. But they just let them go until it's almost finished. Then they try save it and they won't allow us to touch it after. They're the ones that ruin everything and then we suffer for it. (Roy Jones Sr., Apr. 2007)

We used to get abalone along there ... we'd stop and pick them up. Cruise along the shore and a lot of these rocky places you pick up abalone—just on low tides. It's almost every little rock and little reef and rocky point of land and around an island ... we used to find it everywhere. And then in the seventies when they did that big harvesting, wiped out lots of abalone places ... it should be noted in everything. Like ... just the places I described, like they're all over the coast, and that's what you find them around. And then they're all gone; commercially harvested in the seventies. Wiped everything out ... like around all the islands, all the rocky points, all the rocky locations, all the kelp areas and so on. Everywhere. ... it's almost all gone by the seventies, by commercial harvesting. Used to... stop anywhere and pick up abs ... sit in the canoe and just go along the shoreline and throw in an ab or two and keep going. (Captain Gold, Mar. 2009)



...when they did that abalone run around here, we lost out on a lot of stuff that we generally got, and I heard the stories from my uncles too, who were out on the commercial roe on kelp...they're the ones that notice it the most because they really food gather down there, you know, all our stuff that we don't get in the inlet here—and they're the ones that noticed it the most...when the abalone divers went around the island. They were the ones screaming the hardest too, but nobody listened. (Ed Russ, Jul. 2008)

During the HMTK interviews we heard this sentiment expressed repeatedly. There is a deep sadness over the loss of a traditional food source, as well as a frustration in regards to the management of the commercial fishery and the lack of Haida involvement in it.

...we used to harvest enough...it was a delicacy for not only the Haida people but for the coastal people. And a lot of interior people, when they come out fishing, gillnetting, they had areas where they went over the mainland to harvest abalone. But they only took enough that would last them, you know, the winter months ...and that's what the coastal people did too...they never over-harvest abalone. But somebody found that there was a big market for it, so they got the Fisheries to open the commercial harvesting of abalone. But there was no limit on it. (Reynold Russ, Jul. 2007)

### **Poaching**

Despite the closure of the commercial fishery, there seems to be no sign that the abalone are recovering. A continuing problem is perhaps poaching; "...it would be nice to get the abalone back, but it doesn't seem to be able to rebound with the black market," (Judson Brown, Dec. 2008).

Poaching too, after they got wiped out. You know it got wiped out by the licenses pretty good. I remember seeing bags and bags of abalones when we were down doing *k'aaw*. They still had legal licenses, but I don't think any Haidas had... not one of them. And then what was left, the price got driven up and people just were greedy. (Tommy Greene, Oct. 2008)



... I went back there again the following spring and there was none... So I was thinking ... either they migrate ... or they're being poached; I don't know... it was different seasons when I was there, so maybe they move away from there during a certain part of the season. (Ernie Gladstone, Nov. 2008)

One HMTK participant participates in dive surveys for abalone and had the following experience;

...when I first got my [dive] certification, there was a guy asked me [in] Rupert there—I can't remember his name—but he had two boats, a helicopter and a plane, and he asked me if I'd go get abs with him. I just said, 'No.' (chuckling) I should have turned him in, I guess but I didn't think it was that bad way back then. (Tommy Greene, Oct. 2008)

Some suspect that commercial divers for other shellfish species are partly to blame.

People were supposed to be picking sea urchins under the sea urchin license, but they were high-grading and taking the abs and burying it under the sea urchin and then selling it off. That's why we lost ... all the abs all along the coast. (Captain Gold, Mar. 2009)

... [the decline is caused by] commercial fishermen, going under the... pretenses that they're sea urchin hunting. But in reality they were all taking abalone obviously, because there's none left. Very, very sad. (Diane Brown, May 2007)

There's lots of urchin fishermen around there too, around winter, so they're taking out a lot. Abalone too, I think they get; they hi-jack the abalone. (Vern Williams, Jan. 2009)

During the Old Massett verification sessions, it was suggested that the only way to eliminate this illegal harvest by commercial divers would be to close the fishery (Jun. 2010).

### ***Pollution and Habitat Destruction***

While Haida Gwaii's remote location and low level of development may minimize the role that habitat destruction plays in the survival of abalone, there were a few concerns voiced during our study that localized pollution near towns and lodges, logging activities, and dredging may be having an impact.

... you know, there used to be ... an abalone bed here [at Langara]. We used to gather for food and what happened was when these fishing lodges got in there ...DFO just went ahead and ...they just blanketed this right out and said that because of the pollution that these things were causing that you couldn't gather any food in there anymore so... now you can't gather anything in there. (John Bennett, May 2007)

Yeah, there used to be lots of abalones all along the shore them days. Yeah, *guuding.ngaay* [red sea urchins]. Yeah, clams. No cockles though, down there. ... all different kinds down that way. Rock oysters, scallops... that sea cucumber was good eating, yeah... Just along the beach any place. Yeah, even out here there used to be lots, on the island, but that's no more. All gone. I guess there's too much chemical flowing in the inlet nowadays—that's what I think. (Ernie Wilson, Aug. 2008)

There was one participant that said dredging around Louise Narrows has impacted abalone habitat so that it is now only found along the shorelines outside the dredge area (Captain Gold, Mar. 2009).

### ***Areas to Protect***

Several participants identified specific areas that they think would be important to protect for the benefit of future generations of Haida. Many of the areas are located down the east coast of Moresby Island, such as Burnaby Narrows, Cumshewa, Skedans, Hutton Inlet, and Kagan Bay.

Burnaby Narrows for sure—Burnaby Narrows and Hutton Inlet—there’s a lot of clams and abalone and blue mussels. And where else? Richardson Passage—it’s a tiny area but there’s a lot of shellfish there. There’s... rock scallops, blue mussels, abalone, sea urchins—everything there, just like Burnaby Narrows. It’s just a tiny area and there’s everything there... Cumshewa Inlet, too. Cumshewa Inlet including Skedans Island. That’s about it I guess, on the east coast. Skincuttle Inlet. (Percy Williams, Oct. 2008)

This topic would benefit from further research in the Haida communities. Some other future research and management opportunities are briefly outlined below.

### ***Recommendations for Further Research***

As indicated earlier in this document, gaps exist in the Haida traditional knowledge of abalone that was documented as part of the broader HMTK project. Because Northern abalone has been identified as a species at risk, we recommend that further traditional knowledge interviews specific to abalone could be conducted to address these gaps. Some topics that would benefit from further research are habitat and ecology, trends in abundance, and Haida stewardship methods. The study methodology, including the informed consent process and ways of protecting sensitive information, should follow guidelines outlined for the HMTK study (HMTK Participants *et al.*, 2011).<sup>4</sup>

Some of the Haida traditional knowledge about abalone that was documented by this study has been incorporated into action and recovery planning under the Species at Risk Act. This was a pilot project to explore including traditional knowledge in these types of documents and planning. Suggestions for specific research questions are outlined in those draft documents.<sup>5</sup>

---

<sup>4</sup> Haida Marine Traditional Knowledge Participants, J. Winbourne, and Haida Oceans Technical Team of the Haida Fisheries Program. August 2011. Haida Marine Traditional Knowledge Study Report Volume 1: Methods and Results Summary. Secretariat of the Haida Nation, Massett, B.C.

<sup>5</sup> Fisheries and Oceans Canada. 2010. Action Plan for Northern Abalone (*Haliotis kamtschatkana*) in Canada [Draft]. *Species at Risk Act* Action Plan Series. Fisheries and Oceans Canada, Ottawa. viii + 43 pp.

## 2. Clams and Cockles

Shellfish have long made up an essential part of the traditional Haida diet. This fact is evidenced not just by prehistoric middens but also by a continued reliance on shellfish in contemporary times. There's

“... we get [clams] any time of the year, as long as the tide is low.” (Tom Hans, Feb. 2007)

also a cultural connection to the shellfish – the clam shell in particular has a significant place in one Haida origin story, as captured in the *Raven and the First Men* sculpture by Bill Reid depicted on the cover. According to legend, Raven found himself alone one day on Rose Spit, where he saw an extraordinary, partly open clamshell. Protruding from it were a number of small human beings. Raven coaxed them to leave the shell to join him in his world. They eventually emerged to become the first Haidas. Today, the descendents of those first Haidas keep in mind their connections to the sea and the harvest of seafoods continues to be guided by the principle of taking only what you need.

Blackman included shellfish observations in her overview of northern Haida resource use.<sup>6</sup> She recorded that shellfish were usually consumed fresh, but cockles, purple-hinged rock scallops, butter clams and northern abalone were dried for winter use. At the end of winter, in the November to March period of relative resource scarcity, she suggested that shellfish were likely a critical food source. She also determined that proximity to shellfish resources was a key factor in the location of Haida winter village sites (see Blackman 1990). There are dozens of species of shellfish or marine invertebrates that are traditionally used by Haidas. We have limited the species described here to those listed in Table 1.

**Table 1: Clam and cockle species discussed in this document, including Haida names when possible.<sup>7</sup>**

| Common Names               | Masset Haida | Skidegate Haida  |
|----------------------------|--------------|------------------|
| Clam (unspecified species) |              | k'yuu            |
| Butter Clam                | k'yuu        | kaaga/kyuu/k'yuu |
| Native Littleneck Clam     | k'aak'a      | k'aaga           |
| Razor Clam                 | k'amahl      | k'aamahl         |
| Horse Clam/Shell           | skaw         | skaaw            |
| Cockle                     | sgyaal       | sgyaal           |

It should be noted that it is common for Haidas to call native littleneck clams butter clams. The term “clam” most often refers to butter clams, but could also include littlenecks. Because of this, it is difficult to distinguish between them in the study findings, and for the most part we have compiled the information for these two species.

<sup>6</sup> Blackman, M.B. 1979. Northern Haida land and resource utilization. p. 43-55. In: Tales of the Queen Charlotte Islands. Senior Citizens of the queen Charlotte Islands, Masset, B.C.

Blackman, M.B. 1990. Haida: traditional culture. p. 240-260. In: Handbook of North American Indians Vol. 7. W.Suttles (ed.). Smithsonian Institution, Washington, D.C.

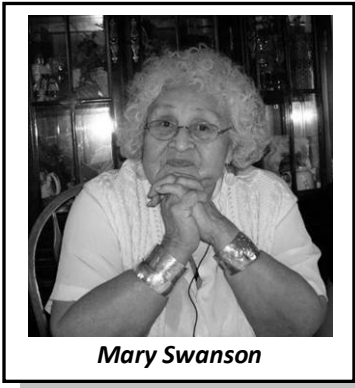
<sup>7</sup> Spellings from Skidegate Haida Immersion Program; Rhonda Bella; and N.A. Sloan, P.M. Bartier, and W.C. Austin. 2001. Living Marine Legacy of Gwaii Haanas. II: Marine Invertebrate Baseline to 2000 and Invertebrate-related Management Issues. Parks Canada Technical Reports in Ecosystem Science No. 35.

Clams and cockles are distributed patchily around the islands of Haida Gwaii due to their habitat needs. For the most part, butter clams and littleneck clams occur in more sheltered bays and require a sandy habitat. Cockles may share this habitat but are not as common. Razor clams are only documented in abundance on North Beach and down East Beach south of Rose Spit; this species is restricted to exposed, high wave energy sand beaches. Horse clams and geoducks are found in the intertidal and subtidal zones, and were only occasionally harvested by Haida people. In addition, there are pink coloured clams that are called ‘sunset shells’ but the species remains unconfirmed. We have not included any information on other invertebrates or bivalves such as mussels or scallops here, although they also make up an important part of the Haida diet and are important to marine planning.

### ***Haida Harvest, Use and Stewardship of Clams and Cockles***

Clams and cockles are harvested with either a shovel or a digging stick called a *dlagu* (M)/*dlḻu* (S). Shellfish like these may be gathered by either men or women; the harvest is not traditionally done by one gender more than the other. Haida people have harvested clams and cockles to eat them fresh and/or preserve them by smoking and drying for countless generations. Mary Swanson said clams would be smoked about the same amount of time as salmon, dried, and then stored in cedar bentwood boxes called *guda* (M)/*guuda* (S).

“... everybody used to dry clams, whatever they could, they used to put their clams into long narrow sticks, smoke them and then dry it for the winter... *k’yuu*, butter clams... there was a sandy beach ... It was in front of Kiusta a little ways at Yaku.” (Mary Swanson, May 2007)



All species of clams and cockles may be smoked and dried, canned or frozen. These days, people say they mostly freeze clams or use them fresh in chowder and fritters. They are often harvested in large enough quantities that any surplus can be given away or traded, once the immediate family’s needs are met. June Russ described how people would share their harvests; “... we used to go digging butter clams in Naden. Bring them home by bag-fulls, gunny sack-fulls, and give it out to the elders here,” (Jun. 2007). Clams are also traded with mainland nations for eulachons and eulachon grease and given away at potlatches.

For many elders, dried seafood like clams and cockles were seen as a treat when they were younger; “...that’s all we were raised on for snacks, not junk food—was *ts’iljii* [dried fish strips], *k’aaw* [herring spawn-on-kelp], *sg̱yuu* [seaweed], dried clams... so I try have it out on my counter whenever the kids are around because I don’t believe in sugar and junk like that,” (Robert Olson, Apr. 2007). Mary Swanson also told how people used to use cockles as soothers for babies.

Old people used to say when the ladies are busy, they used those cockles, *sgyaal*. They said they cooked them and they tie it up with cedar bark, really thin, and put it in the kid’s mouth like a soother ...fresh [cockles]. They said while they were busy on their fish-drying they used to do that. (Mary Swanson, May 2007)

Today, in addition to their important food use, fresh clams are often used as bait, as are cockles – Wally Pollard’s grandmother taught him how to cut cockles into little pieces to catch Skidegate sole when he was younger.

### ***Butter Clams, Littleneck Clams and Cockles***

Butter clams and littleneck clams are widely distributed throughout Haida Gwaii and therefore may be harvested in many different locations. The timing of their harvest however is generally restricted to non-summer months, roughly from September to April.

You can just go get butter clams for your own use in November, December, January, February. And you can’t go getting it for your home use when the dandelions start growing, because of what they eat. The insides are all black inside of the butter clams when it starts feeding. (Margaret Edgars, May 2007)

Old people used to say you quit eating [butter clams] when the ravens quit eating it. When they start eating it again, it’s time to go after it again... and another Haida belief is any month with no ‘r’ in it, you don’t eat shellfish anymore—except razor clams. (Claude Jones, May 2007)

In addition to following seasonal harvesting rules, most clam diggers also try to harvest only where there is a good supply of clean water; “...you’ve got to get them where the water runs through all the time...those clams, they get toxic if you get them where the water doesn’t run through all the time (Tom Hans, Feb. 2007).

Over the years, there have been small-scale or intermittent commercial fisheries for butter clams and native littleneck clams at various locations on Haida Gwaii. Burnaby Narrows was one site of a commercial clam harvest. Many Skidegate elders remember living there during some winter and spring months to take part in the clam-digging. While some of the clams were sold fresh to packers, others were dried for storage for food use.

...we used to dig clams down there and sell it. Packer used to come right to Burnaby Narrows, pack it over to the mainland. I forgot about that. Clams, we would sell. And my mum used to dry some, too...they’d dry it in squares, like that... you line them all up on a stick...they’re in rows, like that, and you put another stick to make it square, then you dry it that way. And then you store it for the winter...partly smoked. ...Yeah, we used to come here and live in February to dig clams. When Kinkles was just little, we used to bring a bathtub down the beach while we were digging clams, put blankets and a pillow in there and sit him on the beach while we were digging clams. You dig clams all along here, all around these islands, inside here, around here ... real lots in here; so many it seemed like two, three layers of clams there was so much there. ... [We used to] sell it by the pound, by the sack. The way we used to do it was we’d go down, dig the clams on a big tide, put them in sacks, and throw them in the water, and put a line on it. So when the packer comes all we do is pull up that sack and then bring it to the packer. (Roy Jones, Sr., Apr. 2007)

There were also commercial butter clam harvests at locations in the north, such as Kiusta and Naden Harbour.

### **Razor Clams**

Contrasted to the widely-distributed but only seasonally-harvested clams and cockles discussed above, razor clams are very restricted in their distribution but can be harvested year-round for food. Razor clams are only found in quantity on the north coast of Graham Island. British Columbia's only commercial intertidal digging fishery for razor clam occurs on North Beach; the razor clam population currently sustains commercial, food and recreational fisheries. This is an important industry for Massett Haidas. There are approximately 270 licensed diggers—of which virtually all are Haida. At a time when lifestyles were more finely tuned to the seasons, the commercial razor clam fishery acted as a driver in seasonal movements and resource harvesting patterns.

...as soon as the fishing season opens, they all go down to the North Island. Well, all our people living here, they all had fishing cabins down there. So the whole village used to move down there. Nobody left here in Massett. They'd move down there, the hand-trollers, and then the other bunch moved into Naden—crab fishermen and their wives working the cannery. And then some from here—whatever left moved out to Tow Hill—razor clam digging. They had a big cannery out there that time. So Massett was empty town when it's summertime. (Stephen Brown, Jan. 2009)

Vern Williams Sr. said that his family moved to Tow Hill for the clam-digging each spring and would live out there until May. He remembers houses and stores—a small village almost—out at Tow Hill. Once again, people would dig clams both for commercial purposes and to meet their own food needs.

... like the razor clams. When we used to live out Tow Hill, when they had that cannery out there ... mum used to bring home the big ones. She used to clean it and dad used to run a mending line with a needle through the [clam]... and hang it up on a rack in the sun. Let it sun-dry really hard ... and then you put that away in a box, the same thing you do with the fish. (Willie Russ Jr., Mar. 2009)

The Tow Hill cannery was eventually relocated to Old Massett and the seasonal community on North Beach diminished. While commercial harvests for the canneries only take place in the spring, many Haidas still gather razor clams in that area today for food, year-round; "... almost all year for the food fishing, but for the cannery it was just March, April, May, June. I think it's the first week in June that we probably quit for commercial use," (Margaret Edgars, May 2007). Like butter clams, razor clams that aren't sold to the cannery may be smoked and canned, frozen, or traded for grease and eulachons with mainland First Nations. People from Skidegate will often trade *k'aaw* to get razor clams from Massett harvesters. Razor clams are also used as halibut bait and to catch steelhead. We explore some of these topics in greater detail in the **Dixon Entrance** section of this chapter.

### **Stewardship Practices**

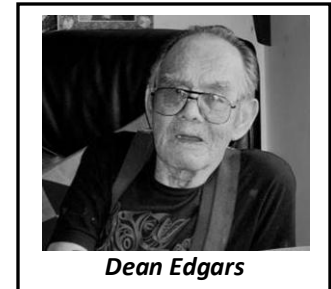
Some traditional Haida harvesting practices may help to sustain clam populations, such as the seasonal harvesting abstention for the summer months.

Reynold: ...the belief that's been said many times, when there isn't a letter 'r' in the month is when you didn't eat it. When you check it out, it's just about the time that the clams are spawning, eh?

June: May, June and July.

Reynold: Yeah, that's the only time you don't eat clams. But it doesn't apply to razor clams. Razor clams you can eat it pretty well all year round ... But with butter clams and cockles and other shellfood, when they're spawning, you don't eat them. (Reynold and June Russ, Jul. 2007)

The harvest timing likely avoids both any red tide events as well as the clams' spawning season; "When they're spawning we don't touch them. They're too skinny... nothing to them," (Captain Gold, Mar. 2009). Those that do harvest bivalves in the summer months tend to do so only when the weather is cold. They say the clams are healthy, even fat, as long as the weather is cold. Some people also say they traditionally quit digging when the clams "get small"; Dean Edgars mentioned this practice.



*Dean Edgars*

There is some evidence that First Nations have influenced clam productivity through the use of "clam gardens" – areas in which a natural clam bed is re-engineered with the use of boulders to increase the size of the productive area.<sup>8</sup> A number of these types of sites have been identified in Gwaii Haanas. Today, Haidas are integrally involved in the cooperative management of the sustainable fishery for razor clams at North Beach, through the Haida Fisheries Program and the Council of the Haida Nation.

### ***Ecological Observations***

The HMTK study recorded relatively little new information about the habitat or ecological requirements or interactions of clams and/or cockles. We present here a very brief summary of some of the specific information that did come out of the interviews, but there were no prevailing concerns or consistent themes documented about changes to clams and their habitat, nor any conclusive observations in regards to population trends.

### ***Species and Habitat Associations***

No productive razor clam areas were identified in Haida Gwaii other than North Beach and the beach south of Rose Spit. There were observations of razor clams present at two locations other than the north coast of Graham Island: Lepas Bay is a site known for razor clams, where Haidas do harvest the shellfish; there were several reports of razor clams around Gray Bay, Dogfish Bay and Cumshewa Inlet.

In addition to having the most abundant razor clam population, North Beach reputedly has bigger cockles than any other area of Haida Gwaii. The cockles in the north are approximately 4-5 inches in size, and much smaller in more southerly areas. Cockles sometimes share the same habitat as butter clams and littleneck clams. Generally, in northern areas, these three species are found in sandy habitat and in rocky areas between boulders. They are often associated with octopus and abalone in these areas. These clams may also be found with black chitons and red and green sea urchins. Their habitat needs seem to be similar further south, where butter clams and littleneck clams are found on sandy beaches, as well as in tiny pockets along the shoreline in rocky areas. These clams are often associated with cockles, chitons, and octopus, as well as sea urchins and mussels at times.

All these delta creeks, whatnot, there's always clams and whatnot out in front and all mussels—blue mussels I guess ... butter clams, littleneck, some of the green sea urchin. ... Rock oysters. Every creek seems like a lot of life seems to be near the freshwater discharge.  
(Captain Gold, Mar. 2009)

During the Skidegate verification sessions, one participant noted that cockles seem to be moving up the beach. Diane Brown said that she is now finding cockles higher up than she used to (Jun. 2010). Another

---

<sup>8</sup> Nicole Smith, [pers. comm.](#). Aug. 2008.

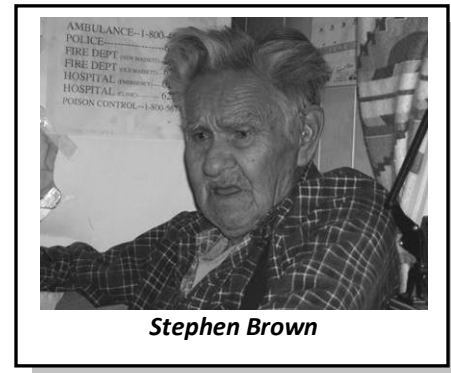
interesting observation that was documented by more than one participant is a feeding behaviour that might be unique to McIntyre Bay halibut – that is, feeding on razor clams. Halibut caught in this area are at times caught with bellies full of razor clam siphons.

... when you're fishing down towards Tow Hill along the beach there, from around May and June when we'd go down there fishing in the shallows. [The halibut would] be full of clam necks, about an inch long. Because in the warm weather, the razor clams, they'll stick their necks out of the ground. They just go by and snip them off like scissors. (Henry Hageman, Mar. 2009)

It gave one participant the idea of using razor clams for halibut bait.

It's really good for halibut bait. (chuckling) I didn't know it was that good. The reason why I had the idea of doing that was when I was fishing on the... I think it was on the 'Smith Sound'... a seine boat. We ... came across from Rupert and we run our gear right along Rose Spit ... real shallow. We left it overnight and next day we went to pull it up, we had 15,000 pounds on that one pull. And the halibut bellies were puffed up like that, full. I was... the gutter that time; that was my job was to gut and clean and ice, and ... I threw one gut on the gutting table because I wanted to see what the heck they were eating—they had their bellies all full. Here it was ...

I guess underneath the ocean, I guess the razor clams are so loaded under there, the end of them sticks up from the bottom? Yeah, them buggers are biting the ends off! That's what their bellies were full of. So I was telling my nephew, Bobby, I was telling him, 'I bet you that stuff's good for halibut bait, the way their bellies are all full of it.' One day I was going out to fish from here and I thought about that and I grabbed a little bit. I wasn't sure—I had a lot of good devilfish bait so I wasn't worrying too much about that. I took a little bit anyway. Holy cow! They bite it as fast as you put your line down! And I didn't bring enough. When the razor clams was finished then the bite slowed right down. They like it way better than the ... devilfish. (Stephen Brown, Feb. 2009)



**Stephen Brown**

### ***Abundance and Populations Trends***

Very good data exist for the North Beach commercial razor clam fishery. To date, the fishery appears to be stable and sustaining large harvests each year without any sign of decline. In fact, the 2007 harvest was reportedly unusually good; "That's the most clams I ever seen, last year," (Vern Williams, Sr., Jan. 2008). There were no indications in the interviews that razor clam size, health or abundance is changing. Similarly, there is no indication of any widespread change in butter clam, littleneck clam or cockle populations. The only trend that was consistently mentioned during the interviews was localized impacts on shellfish from over-harvesting or pollution. Areas close to Langara sports-fishing lodges and past sewage outfalls at Skidegate Inlet and near Old Massett were the three places most often noted.

There's quite a few of them that's disappeared. ... I've gone down the beach a lot of times, sometimes there's a thick film of brownish stuff—don't ask me where it comes from but I figure some of them would come from the rivers that wash down from the mountains. All that filth naturally would spoil things. Even cockles now. Pretty hard to come by now. (Ernie Wilson, Aug. 1998)



## ***Clam and Cockle Distribution and Harvesting Areas by Seascape Unit***

During the HMTK interviews spatial data for clams and/or cockles were documented in six seascape units. Over the following pages we present the information relevant to each seascape unit along with a map showing the distribution and harvesting areas that were mapped for that area during the interviews. In order to protect sensitive cockle harvesting areas, spatial information for cockles has been combined with that for clams. It should be noted that some spatial information for clams was recorded outside of Haida Gwaii during the study. This use was documented by a Haida participant who commercially harvested butter clams on Dundas Island within Tsimshian Territory, around the 1940s. Only spatial information for Haida Gwaii is included here. Due to the scale of the charts used in interviews, spatial information for intertidal resources such as clams and cockles may extend further offshore than would otherwise be expected.

### ***Dixon Entrance and Masset Inlet***

...you know, you look at The Bar right there now... and there's a lot of butter clams there. That's loaded there. You know, you go over there for one tide, you can dig up ten sacks easy... and you still won't finish them. And soft—real soft, eh? And when you dig a hole, you could use your finger. (chuckling) But you know you run the fork from the top of the bar down toward the water and you get lots of butter clams. And then there's also butter clam bed just on the other side of Yan. And the biggest butter clam bed is on the North Beach of Massett. That's the biggest butter clam beach that I know of. You can get butter clams. You can get cockles. (Reynold Russ, Jul. 2007)

#### *Dixon Entrance East: North Beach Razor Clam Fishery*

North Beach has long been a productive clam harvesting area. In all likelihood, Massett Haidas have relied on this site to meet many of their shellfish needs for countless generations. In modern times, the area has sustained a relatively stable commercial razor clam fishery since the 1920s that shows no sign of depletion. In 1924 a clam cannery was constructed at North Beach and it was the razor clam harvest and/or work in the cannery that drew Massett Haidas to Tow Hill each spring.

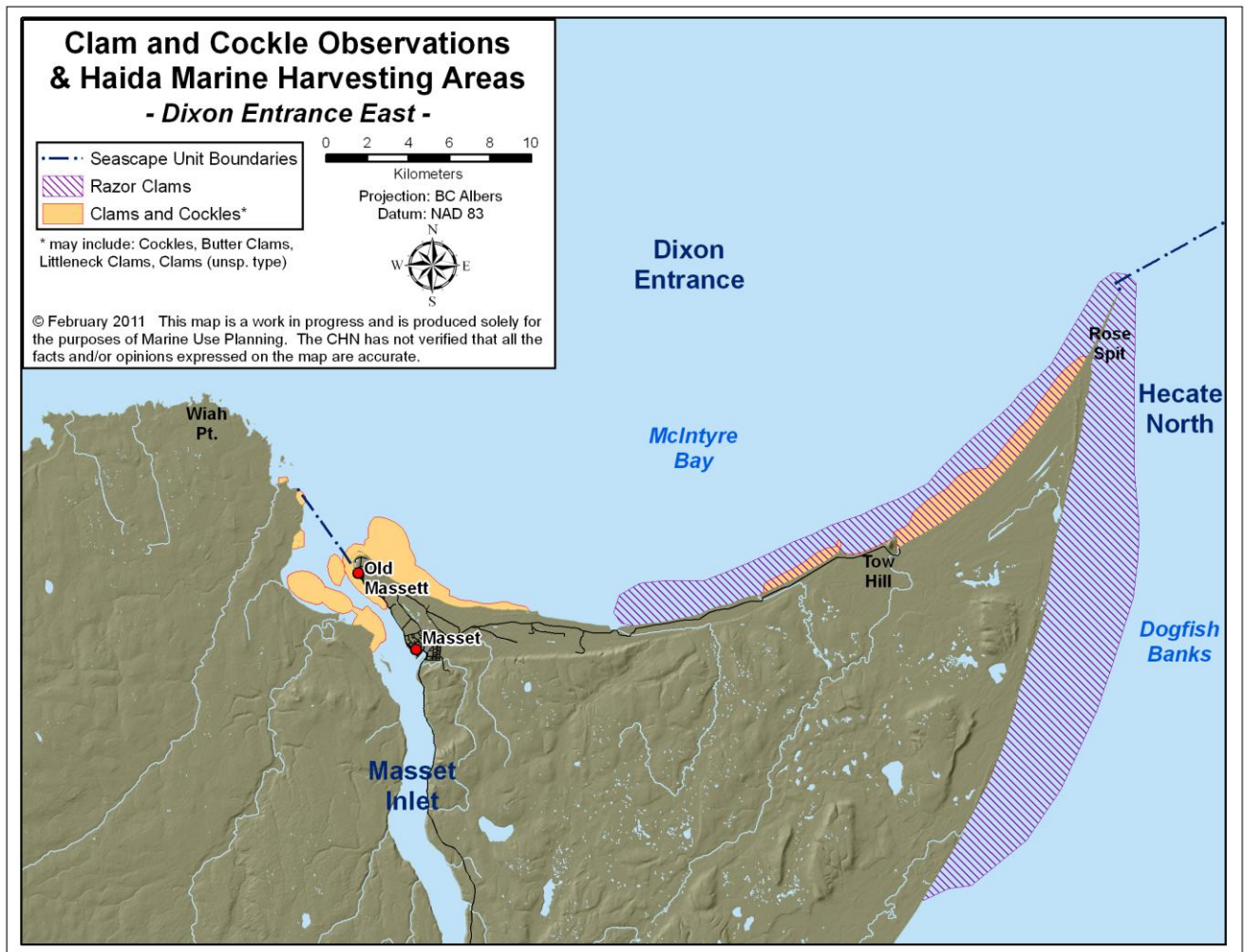
...the first move that was done by the Massett people was in the month of March. Quite a few of the people moved from Massett to Tow Hill. And the purpose of moving to Tow Hill, that was the beginning of when the Massett people would start making money working in canneries, digging clams. And then they did that for the month of March and April. (Reynold Russ, Jun. 2007)

Many of the elders interviewed here remember taking part in this fishery. Stephen Brown described what those times were like:

... that digging razor clams was pretty well same thing as fishing halibut out in the open—you have to know your spots. You can't just get off and expect to get lots of it. All of us had marks on the shoreline. Every time we had a really good spot we put a marker on it and next day we get off same place. Not that easy though, there's too many diggers out there; you can't be choosy, you have to get off where there's a space. So way back in those days, the ladies used to clean the clams up and they run a string through it and they hang it up in the sun, dry it up. You can keep it for the winter that way. Once it's dry you can keep it real long time. ... We used to tell people in those days it was like eating candy to us, eating that dry razor clams. (chuckling) And I seen them do it to cockle too, but I don't think I ever ate a

dried cockle. I ate lots of dry razor clams; it's really good. Way, way back then they had no freezers, no fridge. There was all kinds of different ways of putting your food away for the wintertime. (Stephen Brown, Feb. 2009)

Once the cannery was closed and a new operation started in Massett fewer people moved out to Tow Hill to stay; "...this is when the movement of the people going to different areas sort of... stopped happening ...just about that time, and just a few people started moving to Tow Hill, moving to different areas," (Reynold Russ, Jun. 2007). Nonetheless, the commercial razor clam fishery has provided work and income for Massett residents for many years and continues to do so today. People also still harvest razor clams down East Beach. Figure 3 below shows the eastern portion of the Dixon Entrance seascape unit, with the clam and cockle areas that were documented.



**Figure 3: Map of Dixon Entrance East, showing clam and cockle observations and harvesting areas.**

Massett fish plants process all locally-harvested razor clams, providing important local employment and supplying both the food and bait markets.<sup>9</sup> The clam fishery is co-managed by CHN and DFO, with the

<sup>9</sup> Haida Gwaii Marine Matters, [http://www.marinematters.org/strategy/reflections\\_of\\_the\\_sea.html#17](http://www.marinematters.org/strategy/reflections_of_the_sea.html#17)

Haida Fisheries Program conducting stock assessments, monitoring the fishery, and testing for biotoxins. The food and recreational razor clam fisheries are generally open year-round and there are currently some concerns associated with potential impacts from access, over-harvesting, and pollution; these issues are explored further in the *Management Issues and Suggestions* section.

### *Wash-up*

The Massett beaches that are home to the razor clams can be subject to severe winter storm events. Freezing cold temperatures and strong winds on occasion combine to produce what is locally known as “wash-up” – all sorts of shellfish and sometimes even fish, such as halibut or spring salmon – are washed up on the beach and, sometimes frozen, are easily gathered by hand.

That was a really, really protected secret that was held among the Haida people ...we used to know exactly when scallops would come up on the beach and abalone used to come up ...here, you know, when it's really cold and northwest is blowing real hard. And when we wanted abalone we'd go and check that out and sometimes we'd get a truck load, other times we'd get a few scallops and other clams coming up on the beach. You know, cockles and everything used to come up; it comes up on the beach and that was kept a secret among the Haida people for quite a number of years. (Reynold Russ, Jun. 2007)

Reynold's wife, June Russ, also remembers the harvests they could get on North Beach after a wash-up event. She remarked on how big the cockles were; “... big cockles like that... [I'd] clean one and cook it for him and I ... one cockle. He said, ‘How come you're cooking just one?’ I said, ‘Just eat it.’ (laughing) He got full! They were huge, like that. Just cut it in half, or else I'd make stew with it,” (June Russ, Jul. 2007). Wash-up was noted for several beaches on the North Coast of Graham Island.

Mary: There's all, every kind of fish you could catch. *Tsanii* Claude [Jones] was telling us ...when all the shellfish and stuff washes ashore at *Taaw* [Tow Hill], they call that *sk'ahn dah*.

Colleen: *Sk'aangdaa?*

Mary: Yeah, when you're picking up all the returning seafood that drifted ashore. And then when you're fishing for whatever fish you are going to catch, he said they call that *sk'ah hlang*...

Colleen: *So what does sk'ah hlang mean?*

Mary: Fishing for all kinds of fish, whatever you could catch. He said they call that *sk'ah hlang*. Almost same as the other, *Sk'aangdaa*.

Colleen: *Sk'aangdaa, pick up shells.*

Mary: Mm-hmm.

Colleen: *Sk'ah hlang, fishing for anything, eh?*

Mary: Mm-hmm. (Mary Swanson, interviewed by Colleen Williams, May 2007)

### *Masset Inlet*

Figure 3 also shows butter clam, littleneck clam and cockle harvesting areas around the entrance to Massett Inlet. People used to dig clams in front of the village, across the inlet from the village in front of the Hancock River, and on the sand bar in front of Old Massett. The beach in front of the village was said to be very productive, with butter clams, black chitons and cockles all harvested there. People do not generally harvest here today because of concerns about sewage; “Right out in front here... probably

your grandmother and everybody used to dig just out in front before the sewer... We used to harvest our butter clams right along there... all in front of the village,” (Rolly Williams, Feb. 2009). Many said that they haven’t been able to dig in that area since the mid-1970s.

...years ago, before we had pollution, all our people used to come down here and dig butter clams. You know not everybody owned boats. So they used to go there and then they used to come out North Beach here, to do butter clams and get octopus out here (Robin Brown, Apr. 2007).

Robin Brown also mentioned getting butter clams on the bar in Sturgess Bay. Reynold Russ said that butter clams have been found at Massett Inlet middens at the Mamin River and at Kumdis.

#### *Dixon Entrance West*

Shellfish harvesting areas are generally in close proximity to traditional village sites. Some of these sites include *Yan*, *Yaku*, *Kiusta* and *Kung*; many are still visited for shellfish-gathering today.

... for shellfish there’s a place in Naden there, like ... from George Point here. It’s right across there, on Mary’s Point? There’s a sandbar there. It’s where you get those butter clams. ... They’re real big ones like this too; they’re real white. We stop off there with Uncle John there to get some devilfish. That’s when Philip decide to try that because they were squirting water. So we used our gutting knives and we start digging for them. They’re real shallow. (Willie Russ Jr., Mar. 2009)

Rolly Martin also digs butter clams by the entrance to Naden Harbour, just along the beach from *Kung*. Mary Swanson said that she used to get clams, along with many other types of shellfish, at *Kiusta*. Both Naden Harbour and *Kiusta* used to support commercial harvests of butter clams. Figure 4 on the following page shows the clam harvesting areas identified for Dixon Entrance West.

#### **West Coast**

Very few clam or cockle harvesting areas were identified on the west coast. One area that was noted repeatedly by participants was Lepas Bay – also shown in Figure 4. Several Massett participants said that they still get both butter clams and razor clams at Lepas Bay today.

Mary: And there’s crabs and halibut here and there’s salmon there, too, all kinds of stuff there—shell food, there’s *taaw* [big brown mussels], and *gal* [small mussels], *nuu* [octopus], and *k’amahl* [razor clams].

*Jaalen*: *k’amahl* right there in Lepas bay there?

Mary: Yeah, they have some there. Just get enough for soup because there isn’t too much there, but they’re big clams, ho!

(Mary Swanson, interviewed by Colleen Williams with Jaalen Edenshaw, May 2007).

Generally, people don’t harvest clams on the west coast as much as they do on the east coast; this is mostly due to the different habitats on the two coasts.

You can catch cod anytime out the west coast, long as the weather will let you, you know. But shellfish, little harder to get. I can’t think of any place we could get clams out the west

coast. Not any amount anyway. In Kano you get a few, maybe you get enough to make a little pot of that clam chowder. Not like Burnaby Narrows ... (Percy Williams, Oct. 2008)

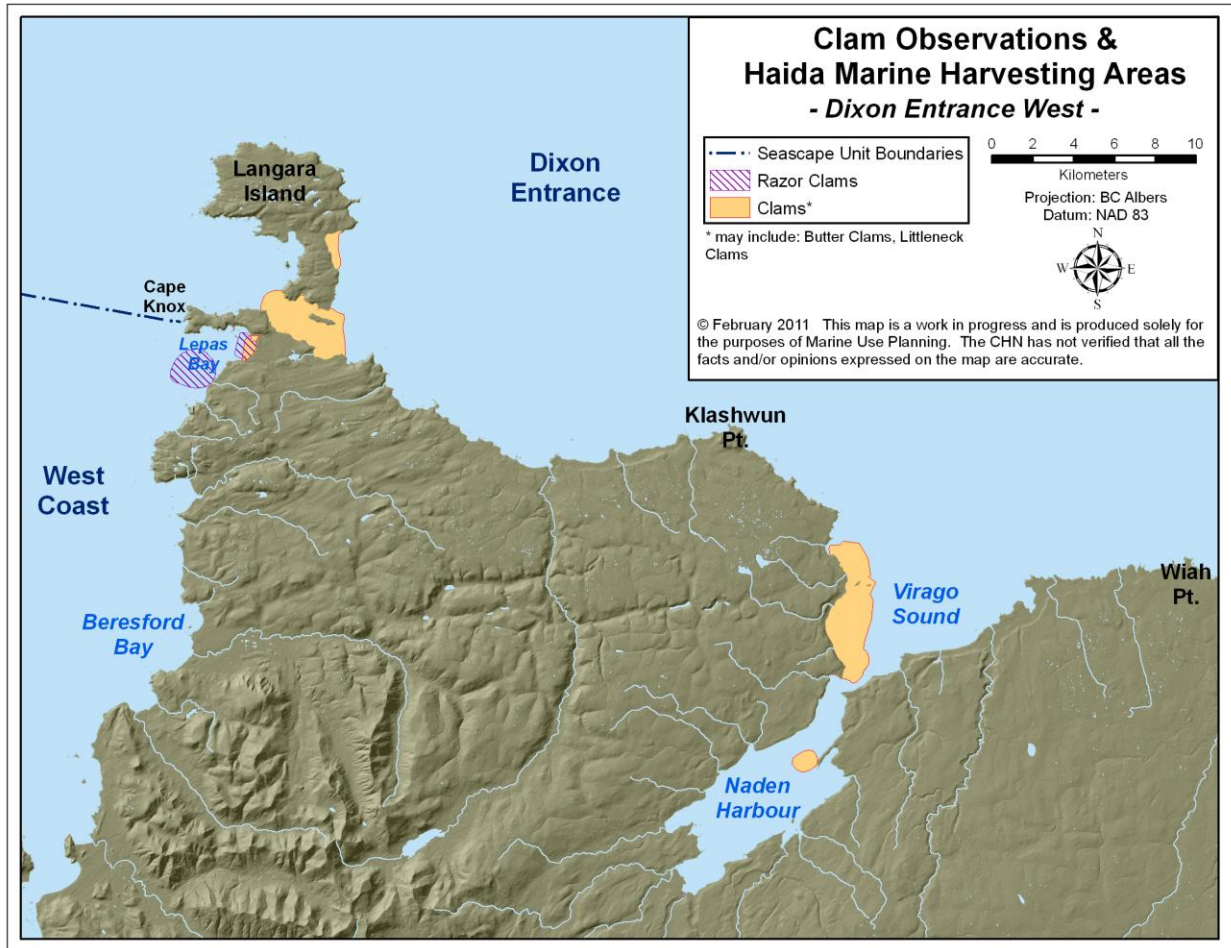


Figure 4: Map of Dixon Entrance West, showing clam and cockle observations and harvesting areas.

Despite the fact that there may not be many places of abundance for harvesting clams on the west coast, there are small areas, pockets of suitable clam habitat, that people rely on mostly for fresh food while harvesting other species in the area. Elder Reynold Russ told this story from when he went winter trapping with his grandfather in Nesto Inlet:

... he told us to go and dig butter clams. So four of us went out. We must have dug about four sacks of butter clams and you know, in Nesto Bay, it's fresh water running into the bay. So he made us go beyond that to get just salt water. So we had to row all the way—no kicker, nothing—all by rowing. And we put a lot of water in the keg and then rowed back, and we had some in buckets, and in cans. This was salt water. So when we got the barrel up by the house, he got us to dump the butter clams into the salt water. So you know, I asked him, 'Why are we doing this?' You know, he never answered me. He always used to say, 'Just see what I'm doing.' You know? That's all he used to say to me. So... about the day after we put the clams in the wooden keg. I see him get up and we had ... a big bag of rolled

oats. He'd go by and get a cup. And he'd go outside. And up to this time I didn't know what the heck he was doing ... so this one morning he got up, he dressed and it was still dark in the morning and he went by, got a big dipper of rolled oats. So I got out of bed and walked out after him. And here he's putting the rolled oats into the keg of butter clams. So I said, 'Grandfather, what are you doing that for?' And this time he told me, 'Well, I'm feeding it. You have to remember that this whole beach out to the mouth of the river here is going to freeze over. You won't be able to get butter clams.' And that's the reason he made us dig all those butter clams. So we had fresh butter clams anytime we wanted it because of that. (Reynold Russ, Jul. 2007).

The only other clam harvesting areas documented for the West Coast seascape unit include a very small polygon at the head of Botany Inlet in Tasu Sound – visible on the Gwaii Haanas map in Figure 7 – and a polygon on the north side of Chaatl Island shown in Figure 5. In addition, Kano Inlet was mentioned for clam harvesting during the Skidegate verification session but the location was not mapped (Jun. 2010).

### ***Skidegate Inlet***

Skidegate Inlet has a great diversity and an historic abundance of shellfish. The village itself is situated on a productive shellfish beach where many elders remember harvesting clams and cockles as children.

... from the Inlet here ...I can honestly say that I seldom missed a day tide. From my first memories I ran down the beach to pick, to get cockles. I just have to run down and I would fill a bucket in no time. Once my mother taught me how to look for the eyes and that? I would ...have a bucket filled in no time; it was just so plentiful. ...I would fill it up and she would make me share it; I would bring some to Kathleen Hans and Flora Collinson and... I could get a bucket easily. So that was out here, right in front of the village. (Diane Brown, Apr. 2007)

... we used to [get clams] right in front of Skidegate, too... low water, we'd go out and get clams and farther up the Inlet, towards Kay we used to get cockles. Yeah, right from the point over this way, right up to First Beach, we'd go clam-digging. And up here you'd get cockles, I think. You get more cockles up this way [towards Kay]. (Lonnie Young, Apr. 2007)

Clams are found in numerous areas in the inlet, along the shores and on many of the islands, like Lina, Maude, Grassy, and Transit Island. Some of the other areas mentioned as being good for clams and/or cockles are First and Second Beaches, Balance Rock, Miller Creek, Shingle Bay, Kagan Bay and Slatechuck.

Many people travel further up the inlet to harvest clams at Slatechuck, Trounce Inlet and even the West Narrows; "Yeah, you can ...take the boat and go out through here, you can get lots of clams out in Trounce... all along in here you go for clams, or crabs," (Lonnie Young, Apr. 2007). Ernie Gladstone is another person that harvests clams around Slatechuck, Tarundl Creek and Kagan Bay; "Just this side of Slatechuck, and that whole stretch along there has lots of clams ... anywhere there's a little bit of sand or mud there's usually clams in there," (Ernie Gladstone, Nov. 2008).

**"... further up the inlet, towards Slatechuck is where a lot of clam-digging was done. On all the islands going up there, it was nice big white clams. That's my favourite spot." (Roberta Olson, Apr. 2007)**

Back closer to home, Roy Jones Senior said that there used to be cockles at some locations on the south shore of Skidegate Inlet, but he was uncertain whether they can still be found there. Percy Williams also mentioned getting cockles out in the Narrows in the past.

Figure 5 shows the clam and cockle areas documented in Skidegate Inlet.

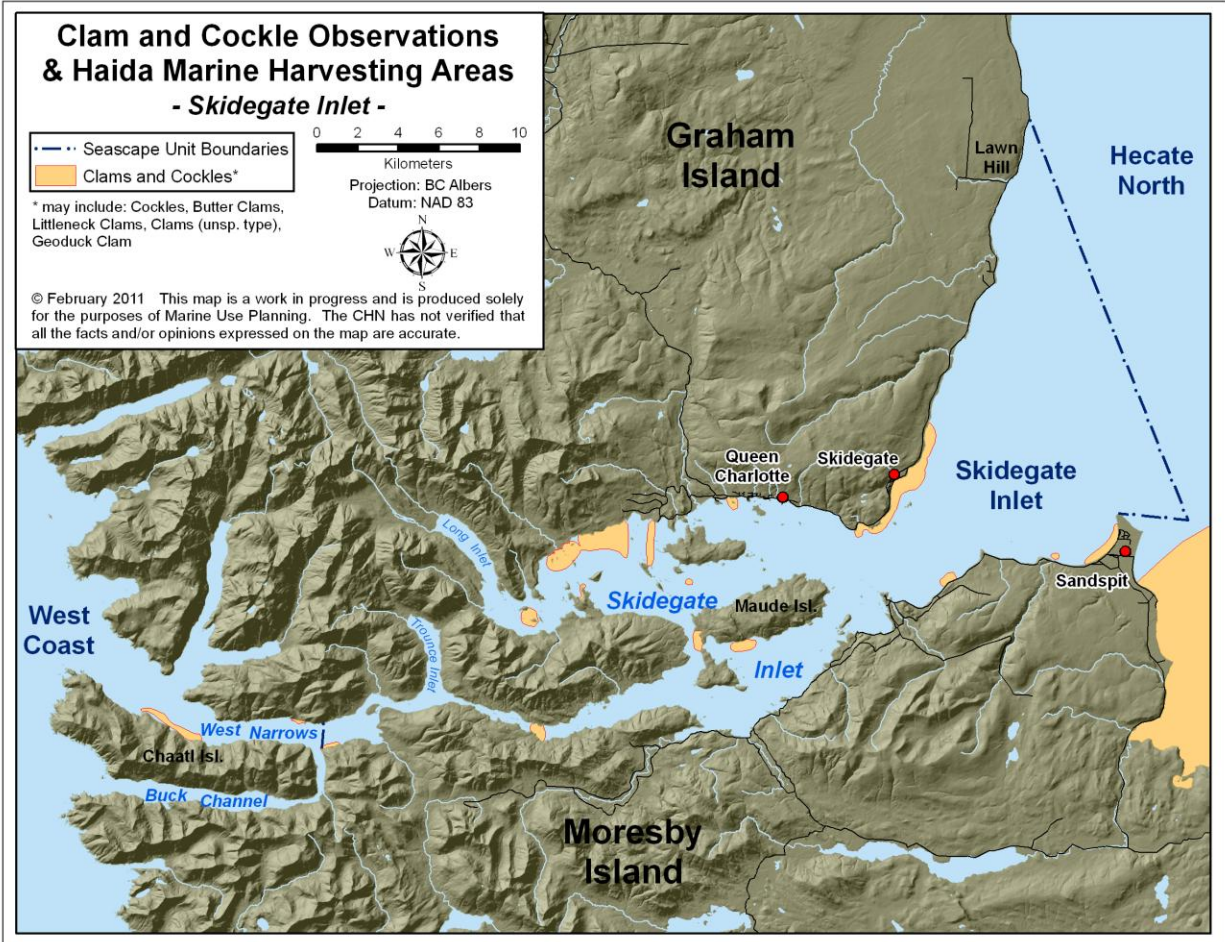


Figure 5: Map of Skidegate Inlet showing clam and cockle observations and harvesting areas.

Unfortunately, many types of shellfish have declined in Skidegate Inlet.

...back just at the village, when we were kids they used to be able to pick up those little brown [urchins]; they called it *t'aa* [black chiton]...and *styuu* [green sea urchin] was another one—and those were the best. They were the smallest and the sweetest; they were quite different from the big purpley-reddy ones...there's no mussels there anymore, and there's no *styuu*...I don't collect [in front of Skidegate anymore]. And there's not much cockles, whereas there used to be so much when we were young. (Roberta Olson, Apr. 2007)

During the Skidegate verification sessions, it was suggested that the declines in clams and cockles may be due to over-harvesting or pollution (Jun. 2010). There was also mention that the construction of the seawall changed the beach and likely had a negative effect on the clam populations nearby. Concerns

about pollution and shellfish declines are mostly restricted to harvesting areas close to the village site and the old sewage outfall, and are discussed more in the **Management Issues and Suggestions** section.

**Hecate North**

Butter clams, littleneck clams, cockles and razor clams can all be harvested in the Hecate North seascape unit. The razor clam commercial fishery is mainly on the Massett beaches west of Rose Spit, but razor clams are also found on East Beach and sometimes harvested in the area immediately south of Rose Spit (shown previously in Figure 3). While their presence is noted in three areas further south – Gray Bay, Dogfish Bay and Cumshewa Inlet – they do not occur in abundance and are generally not harvested in quantity in these other areas. Figure 6 shows the areas documented for butter clams, littleneck clams and cockles in Hecate North during the HMTK Study.



Figure 6: Map of Hecate North showing clam and cockle observations and harvesting areas.



Copper Bay, Cumshewa Inlet and Skedans were mentioned most often for the harvest of butter clams and littleneck clams, and possibly a third unconfirmed species.

...there's two different kinds of clams in Copper Bay, you know. There's those butter clams and then those pink ones ... we get [clams] any time of the year, as long as the tide is low. There are beautiful clams—there's butter clams and the pink ones. The pink ones are sweet... (Tom Hans, Feb. 2007)

Many people said they get clams in-between tides while fishing sockeye at Copper Bay; "... [sockeye fishing] would be real good in mid-May, on the tides. And in-between, you know, you get a bit, go out for clams... but there used to be lots out here... (Lonnie Young, Apr. 2007). People also harvest cockles in front of Copper Bay. It was noted that the Copper Bay cockles used to be really big, but they are no longer there. Sheldens Bay and Gray Bay are noted as other good places to get clams. The primary use of shellfish here is for food; there are no commercial operations in these areas.

Cumshewa Inlet can also be an important clam-harvesting area. Diane Brown said that she used to drive to Cumshewa with her family, launch a boat there and get clams in front of the village. They would also harvest clams, abalone and urchins around Skedans when they stayed there. Tom Hans and Ernie Wilson are other elders who have harvested in this area; both mentioned the clam beach in front of Cumshewa Village in particular, but Tom also said that clam beaches likely used to be in front of every Haida village, perhaps serving as one of the criteria for a village's location. One participant mentioned that there are a lot of geoducks in Thurston Harbour, however this polygon did not get mapped. Only a few Haidas documented harvesting geoducks.

### ***Gwaii Haanas***

Within the Gwaii Haanas seascape unit, it was Juan Perez Sound that was noted most often for harvesting clams. Many people harvest clams in this area while working on spawn-on-kelp.

Juan Perez, here we come, you see. Right here—Section Cove—it's not in there, but that's where the biggest herring fishery, roe on kelp goes, is right here. And this little island here that you come through—you can't see it—that's the best butter clam bed going. You can load a skiff up there with butter clams (Robin Brown, Apr. 2007).

Overall, it was Burnaby Narrows, or *K'iid*, that arose time and time again as a very important area for both commercial and food clam harvests.

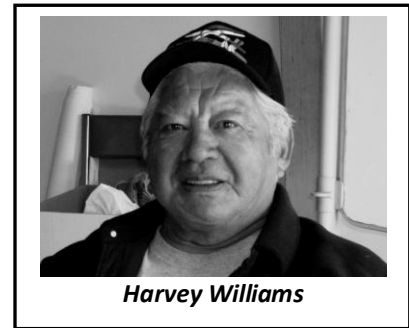
... Burnaby Narrows—you put the fork in and the clams just pour out of the ground... unbelievable. We commercially dug clams there for two winters and you dig there for two months out of the winter. Come back the next winter and they're just as abundant again. I don't know where they come from in a year. They grow a little slower than that I think. But there's lots, holy! (Percy Williams, Oct. 2008)

**"This is Burnaby Narrows; there's lots of clams in that place ...butter clams. Geez, it's thick in there – used to be, anyway – lots of clams in that place."  
(Claude Jones, May 2007)**

...Burnaby is just loaded with clams. They used to have a cannery, clam cannery, right in here. Shells were just thick along the shoreline! (Ernie Wilson, Mar. 2007)

Many elders remember going to Burnaby Narrows to dig butter clams when they were younger; this observation is probably from the late 1940s;

... there used to be a small village there. Everybody had their own cabins there and we used to go there to get *k'aaw*, halibut ... they used to dry the halibut, dry the *k'aaw*, or salt it. And spend the whole month of April and May down there. Or even earlier than that, it spawns quite a bit earlier than it does around here... We used to go down on [my father's troller] and while we were camping there on these low tides, we used to go digging clams for a living. You know, BC Packers had a big packer there and they were buying clams off us...a hundred pound bag used to be \$2.50. And, you know, that was money. The packer was coming in once a week and generally take our grub order and we ate good while we were down there. Yeah, we'd get our fresh fruit and vegetables ... out of our hard-earned money digging the clams. But I thought it was fun. (Harvey Williams, Apr. 2007)



Harvey specified that most of their commercial clam-digging was done at Island Bay. The clams dug during this period were packed to the mainland on boats, but previous to this, a clam cannery had operated in nearby Bag Harbour. For food use, the clams are for the most part smoked or canned.

...guys would go out fishing for halibut, we'd go along the shore, get abalone, clams, smoke the clams...we had a little smokehouse; we had little cabins there. Same as we did in *K'aasda* [Copper Bay]...we used to just go down the beach and get clams...and then we just smoked them...we'd string the clams up on some string and we'd smoke them for...not that long—not even a day, I don't think...because they get too tough if you smoke them too long...They're real good...like smoked oysters and that. (Lonnie Young, Apr. 2007)

...we ate a lot of clams, we jarred a lot of clams and...you had to jar it there, because there wasn't no deep freezes or anything—and like I said, that was...a place that we went, it was seasonal, to gather food down there... the Haidas knew there was great clam beds down there so when the...companies offered to pay for it, that's where they went down to dig the clams...it would be late fall, I guess, just before the winter. (Paul Pearson, Apr. 2007)

Some other areas noted as having lots of clams are at the head of Beljay, Atli and Powrivco Inlets on Lyell Island, Ramsay Anchorage, Murchison Island, Faraday Island, the Bischofs – “Beautiful clams there, big clams,” (David Martyniuk, Nov. 2008) – and Hutton Inlet.

Hutton Inlet, a great big clam bed up here—real dandy clam bed, lots of clams... my uncle and I did commercial clams in 1947-48. We dug 38 bags one night. Holy smokes. They were just falling out of the ground there were so many there... Hutton Inlet. [That was] wintertime, just before Christmas, November and December. (Percy Williams, Jul. 2009)

Many people say they get clams when staying at Hotspring Island; “... that was one of the best spots I ever seen for butter clams – there and the place up by Hotspring... by Faraday, there's another one that was like that. And that's because of the flow of the water between the islands, I think. Lots of food for them and it's pretty sheltered,” (Martin Williams, Feb. 2009). Jedway, in Skincuttle Inlet, was another location noted for its clam beds; though little was mapped here during the interviews, there are

purportedly “lots of clams” in the area and “you can find clams on any good beach” (Percy Williams, Skidegate verification sessions, Jun. 2010). Percy said that *S<sub>g</sub>ang Gwaay* also has very large clams.

That’s where I saw the biggest clams I ever saw in my life. They looked like horse clams. We were tied together, eh? Tied-up off a rock, little island, and when the tide went low we were looking out the pilot house and could see them squirting on a little sandy beach. We went ashore and clams were like that, like horse clams. We thought they were horse clams and they were big, big clams. We ...made clam chowder out of them; we thought they would not be very good [because] they were so huge, but it was excellent. (Percy Williams, Jul. 2008)

One additional area that was mentioned for clams was Tanu. While no harvesting areas got mapped here, Skidegate verification session participants said that like most ancient village sites, Tanu would have had clam beds associated with it. Figure 7 shows the areas documented for clams and cockles in a portion of Gwaii Haanas.

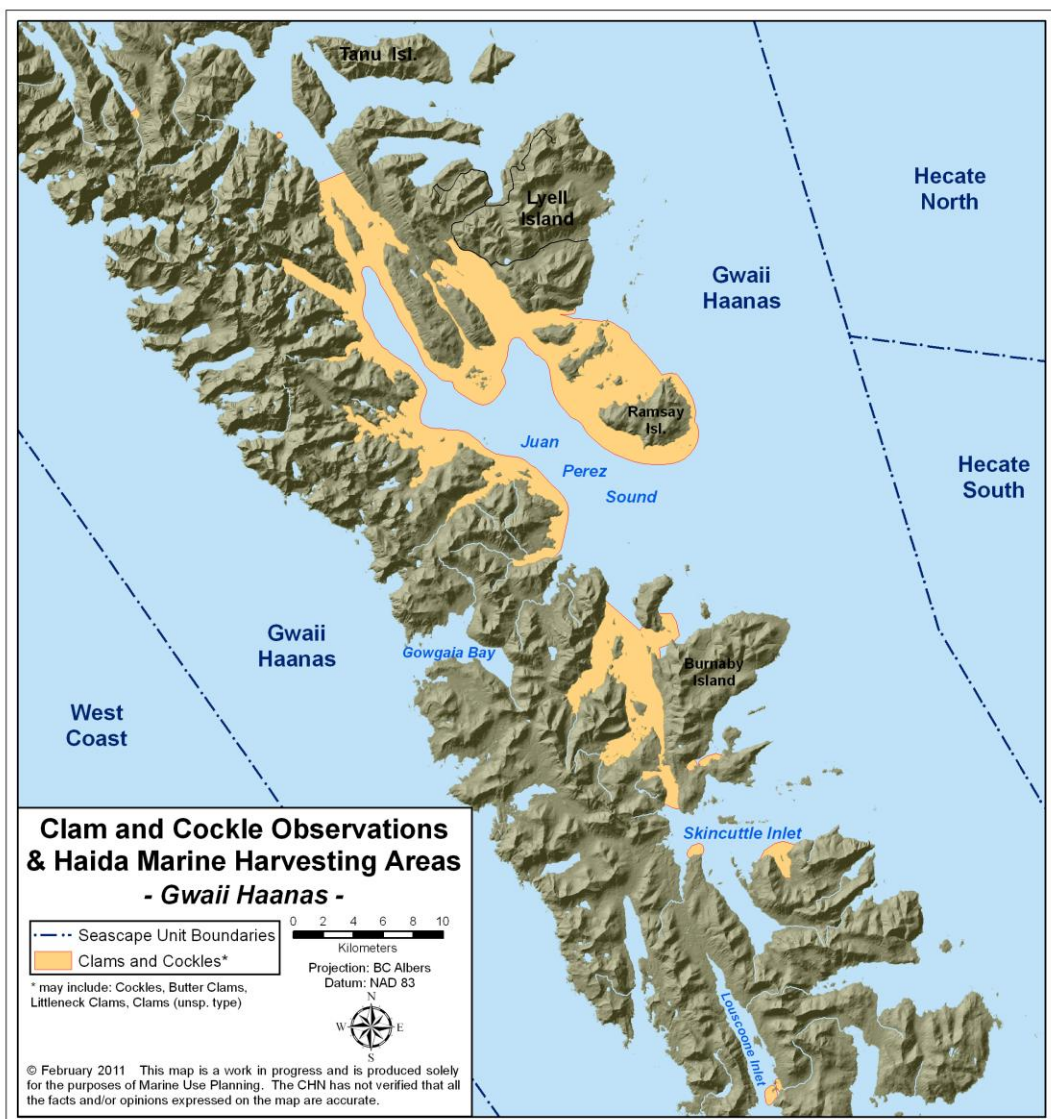


Figure 7: Map of Gwaii Haanas showing clam and cockle observations and harvesting areas.

## ***Management Issues and Suggestions***

During the interviews, numerous sites were mentioned as having very abundant populations of clams and/or cockles in the past but not today. Over-harvesting, pollution and habitat degradation were all mentioned as possibly having localized impacts on shellfish. Competitive fisheries were only noted as a problem in one area of Haida Gwaii – North Beach.

### ***Competitive and/or Recreational Fisheries***

Some people voiced concerns that the razor clam harvesting on North Beach may not be sustainable. It is the recreational fishery in particular that is drawing criticism.

...if you dig a big clam out, look at your sand really hard and you could see the tiny little...razor clam trying to get into the sand again. Because there's tons of it; it's just brown like this on the beach when people are digging. All the babies go up; they can't get into the sand again. It makes me real angry at people when they're doing that...what are they going to eat when it's all taken away? (June Russ, Jul. 2007)

We were told in our young days, never dig clams in the months with no 'r' in them...because you go out there in July and August, you dig a hole, you'll see little baby ones float up. Now, when that does happen, that clam is dead. It'll never survive. Now that's why we're trying to stop the recreational clam-digging going on and stop it all together. In this area, because if we don't, we're going to have nothing left there...we have to deal with the access in a fashion that we give some people some orientation on how to go on the beach. And you just take enough what you want, and leave the rest alone. (Robin Brown, Apr. 2007)

### ***Pollution and Habitat Destruction***

Most habitat concerns are centered on localized pollution of shellfish harvesting areas from sewage outfalls. The beaches in front of Old Massett were repeatedly mentioned as an area of concern.

... you used to be able to get clams right outside of Massett, back in the day. Because I remember going out digging clams with my dad, when I was a kid. But because of all the sewer nowadays, it's not a good idea anymore. (laughs) You don't want to do that... because of the outfall and stuff, that's why you don't go after it anymore. (Vince Collison, Mar. 2007)

Both Rolly and Martin Williams are concerned that what happened to the beaches in front of the village of Old Massett is now happening at Dadens Pass; they fear that raw sewage from the sports fishing lodges is ruining traditional shellfish gathering areas.

... that's a concern with me for out like Langara way, is that... with all those lodges out there and the way they dispose of their sewage—the floating ones ... they just have to hold it for 48 hours and then they can dump it, eh? So when you've got that many of them out there doing the same thing... it's not good for the shellfish. I don't know if any shellfish have even been tested out there for you know, what's out there. (Martin Williams, Feb. 2009)



***Martin Williams***

Numerous participants in the Old Massett verification sessions raised the issue of lodge septic fields overflowing and draining into Henslung Cove and contributing to pollution in the Langara area (Jun. 2010). Skidegate Inlet is another site that has suffered shellfish declines, possibly due to pollution.

Oh, yeah, there used to be lots of fresh food, even right out here. Now it's all gone... cockles, and... *giinuu* [sea cucumbers]... that's good eating. Used to be lots of it, too... we used to pick up *styuu* [green sea urchins] even at the point, right out here... lots of *t'aa* and *sgiiida*—red chitons. And black ones, too. Yeah, all of that used to be out here [in front of Skidegate]... every big tide you'd go out and get whatever you can get. People used to be lined up all along here, years ago, yeah. Now you don't see anybody... I myself think there's too much chemicals from the sewers that's got rid of everything... (Ernie Wilson, Mar. 2007)

You know, not that many people had cars when I was little ... so you had to be within walking distance, when I was a kid, for berries, *sgyuu* [seaweed], cockles. And then the sea urchins just disappeared; so did the cockles. It's just like one year we went down and there were no more. They just went. And never been back. You could find the odd cockle, you know, but not like when I was a kid. I don't know how it coincided with the sewer pipe, but when they first put a sewer pipe down, they had it above the drop-off. There's a drop-off on zero tide... you know that legend where the monster dragged boards through the inlet, that's why there's that deep hole? Well it just drops off out here and consequently, soon after they put the sewer out—I was in public health them days—I had noticed like Tampax and toilet paper and formed *amma* [feces] even, washing up on the beach. So... they... added onto the outlet, to go beyond the drop-off or something and so it quit happening after that, but we were told that what came out of that pipe would be almost drinkable. (chuckling) It wasn't true. I don't know what went wrong, but they did fix it. But I have a feeling that might have had something to do with the cockles... or we picked it too much. You know, one or the other. (Diane Brown, Apr. 2007)

During the Skidegate Inlet verification sessions, Diane mentioned that she is starting to see little baby cockles in the inlet again – a possible sign that they are recovering; this was noted for some northern areas in the Massett sessions as well (Jun. 2010). North Beach clams are now also said to be recovering.

... the whole of the North Beach was just full of butter clams... before the DND moved here and put their sewer line out... they poisoned the butter clams. It's loaded out there right now. But after they put in that new system, the people who put it in told me that within a year the whole thing would be all back to the way used to be... hopefully that will happen. (Reynold Russ, Jul. 2007).

Naden Harbour was the only placed mentioned as suffering physical habitat damage to clam beds.

We used to get lots of butter clams in Naden, but they wrecked it. The big... logging boats wrecked it. There used to be a sandbar right across from the island and they pushed it away. No more butter clams now. Yeah, it's right [by the mouth]... not too far from the graveyard anyway. (Edgar Sills, May 2007)

Virago Sound is another location that used to be very productive for clams, but is said to be washed out now (Skidegate verification sessions, Jun. 2010). Several areas were identified as being severely damaged from commercial geoduck harvesting operations. This observation came from Rennell Sound:

... we did geoduck surveys pretty well like, you know, where they thought there would be a lot of them, to have their openings? And we also went and checked where ... like five years after they had the geoduck opening, it looked like World War I battle grounds. Still after five years ... nothing grew, absolutely nothing. Not even a sea fan, not a clam, nothing. I don't know why. (Tommy Greene, Oct. 2008)

One final management concern discussed in the interviews was in regards to the fact that Burnaby Narrows – a traditional Haida food-gathering site – is now within the Gwaii Haanas National Park Reserve and Haida Heritage Site. There was some concern about continued access to this site.

***Areas to Protect***

Some of the areas noted for protection in regards to shellfish populations were: Burnaby Narrows, Cumshewa, Copper Bay, Skedans, Hutton Inlet and Trounce Inlet. Kagan Bay was also suggested as needing protection because it has good shellfish and is close to Skidegate village; "... you can go up there, you know, drive up there and get enough clams for... a few feeds and ... do a little bit of canning too, if you want. And it's relatively easy to get to," (Ernie Gladstone, Nov. 2008). Because this was not commonly asked in the interviews, this topic would benefit from further research.

### 3. Herring

Pacific herring are integrally important in west coast ecosystems. Their arrival each spring drives seasonal movement patterns – not just those of humans, but also the many species that share their environment. Whales, porpoises, sea lions, cormorants, eagles, halibut, salmon and more can be seen feasting on the returning herring and their spawn. Herring mature at the age of 3 and live an average of 10 years. During their lifetime, they may return time and time again to spawn in the nearshore waters of Haida Gwaii. This activity signals the time for spring fishing and gathering to begin.

**“You just look at a map; everywhere you used to get herring spawn.” (Roy Jones Sr., Apr. 2007)**

The Haida relationship with herring is long and complex. Long ago, before coastal fisheries were industrialized, the Haida harvest of herring could be separated into two distinct types: gathering the spawn-on-kelp (SOK) or *k’aaw*; and fishing the adults. *K’aaw* has long been an important Haida staple and trade commodity and continues to be very important today. Adult herring are also still highly valued as bait fish, especially in spring salmon and halibut fisheries.

Industrial fishing for herring began around the beginning of the twentieth century, and can be divided into three main time periods by product: the dry salt, the reduction, and the roe industries. Most of the dry-salted herring supplied Asian markets in the early 1900s. The reduction fishery began during the 1930s, supplying plants where the herring were transformed into oil and meal for animal feed and fertilizer. The first major reduction landings in Haida Gwaii went to a plant at Pacofi on the east coast of Moresby Island, that operated from 1938-1943.<sup>10</sup> A steady demand for fish oil in BC drove this industry from 1935-1967. Herring were caught by purse seine in both summer and winter, but the bulk of the catch was taken January to March each year, by just 2-3 seine boats. Several Haidas were employed in the processing plants, but few were actively involved in the fishery itself.

The reduction fishery flourished during the 1940s. DFO began recording spawning and catches around this time, and in the 1950s exploitation rates are reported to have climbed to 50-90%.<sup>11</sup> Industrial herring catches went unregulated, limited only by market demand. Some of the largest recorded catches in Haida Gwaii came from Skidegate Inlet, Selwyn Inlet and Burnaby Straits – each important traditional Haida fishing and gathering areas. By 1957-8 fishermen reported catching only small fish in Skidegate Inlet, as well as a marked decline in catch size; no spawning was reported for 3 years in a row. By the late 1960s, overfishing and government regulations began to impact the industry, and the reduction fishery was closed coastwide in the late 1960s.

Within 3 years government managers considered the stocks recovered and in 1972 a new fishery – the roe herring fishery – started up to supply markets in Japan. In the roe fishery, adult herring are gillnetted

<sup>10</sup> Tester, A. L. 1945. Catch statistics of the British Columbia herring fishery to 1943-44. Bulletin of the fisheries Research Board of Canada 67. In: Jones, R. 2000. The herring fishery of Haida Gwaii: an ethical analysis. pp. 201-224 in R. Ommer and T. Pitcher (Eds). Just fish: ethics and Canadian marine fisheries. Social and Economic Papers No. 23. Institute of Social and Economic Research. Memorial University of Newfoundland.

<sup>11</sup> Hourston, A.A. 1980. The Decline and Recovery of Canada’s Pacific Herring Stocks. Rap. P.-v. Reun. *Conseil International pour l’Exploration de la Mer*. Vol. 177. In: Jones, R. 2007. Application of Haida oral history to Pacific herring management. Fisher’s Knowledge in Fisheries Science and Management. Coastal Management Sourcebooks 4, UNESCO Publishing.

in order to remove the egg sacs from the females. This is then processed and sold overseas. The bodies of both the male and female fish are then reduced to fish meal and oil.

It was also around this time that a few Haida fishermen began to experiment with “ponding” herring, based on their experience with operating herring bait ponds that supplied other commercial fisheries. It was demonstrated that artificially suspending kelp in a bait pond could increase production and minimize mortalities while meeting the demands of the roe on kelp industry. For this fishery, the herring are seined and transferred to manmade ocean pens where they are held until they spawn. Once the fish have spawned, they are released. Most of the herring survive to return and spawn again in following years. The first experimental licence for this fishery was issued in 1971. Full commercial production began in 1975 with Haidas holding 8 out of the original 12 licences by 1978. Haida individuals or organizations currently hold 6 out of 10 licenses on-island.

Commercial roe herring catches in Haida Gwaii waters were the dominant catch from about 1972 to the mid-1990s. Since then herring populations in Haida Gwaii have been depressed. Due to low herring stocks the commercial spawn-on-kelp fisheries have been curtailed in some years since 1995 and have been closed in the Gwaii Haanas area for the past several years. Haida traditional fisheries have priority over commercial roe herring and spawn-on-kelp fisheries and have continued. However Haida catches have been less than usual. Bait fisheries serving the halibut fishery have been uneconomic for pond operators since about 1990 when the management system switched from a competitive fishery to individual quotas and the halibut fishing season went from 1-2 months to 9-10 months of the year.

Industrial fisheries have affected the herring populations that spawn in the waters of Haida Gwaii. Today there are only small populations of herring remaining in Skidegate Inlet. The major stock area from Louscoone Inlet to Cumshewa including Burnaby Narrows has been closed to commercial herring spawn-on-kelp and roe herring fisheries for the past several years. There is concern in the Haida communities that current herring policies do not allow the herring to recover by allowing commercial roe harvests as soon as the herring biomass exceeds a certain amount (the cutoff level). There is also frustration that Haida voices remain unheard and unheeded in current federal fisheries management. In the following sections we present some Haida knowledge and perspectives on herring, including past and contemporary use, ecological observations, cultural importance, and management suggestions.

### ***Haida Harvest, Use and Stewardship of Herring***

The importance of herring in the marine environment of Haida Gwaii and in the lives and livelihoods of Haida people cannot be overstated. Herring provides key sustenance for most species. Its timing is also critical – arriving in the waters of Haida Gwaii early spring, it is a much-welcomed and often much-needed plentiful source of fresh food before the salmon season begins. It attracts myriad other species, renewing and recharging the waters of Haida Gwaii after the winter months.

*K'aaw*, or spawn-on-kelp, is a favourite food for many Haidas.

... I just had a fresh feed of *k'aaw* yesterday. Oh! It's so good. It just came up from down south... so I baked a potato, and I smothered it with tons of *taw* [eulachon grease], put it on the *k'aaw*, and then drizzled the *səyuu* [seaweed] on top. And my granddaughter came in while I was eating and so she had it and she couldn't quit. She was like, '*Nanaay*, I haven't had this since I was a kid.' It's like, well, it's always here. Mm. My stomach's going to start growling again! (laughing) (Roberta Olson, Apr. 2007)



With the arrival of spring, many Haida families traditionally head out for the herring and *k'aaw* harvests. People in Massett often go out to Naden Harbour or up into Masset Inlet to await the spawn. Skidegate Haida used to have plentiful spawns and herring populations within Skidegate Inlet, so many harvested there in the past. Other harvesting takes place further south at Burnaby Narrows or *K'iid*, near historic spring fishing and gathering camps. While people don't spend weeks or months at the camps any longer, many still go down for short trips, still relying on the same areas.

In addition to the spawn on kelp, Haidas traditionally harvest adult herring to be used as bait for catching other fish; to be eaten fresh or smoked for eating later; and in the past, rendered for oil. There are several different ways of harvesting *k'aaw* and the adult herring, many ways of using the final products, and many different locations the fisheries occur. In the following sections we have separated the Haida use of herring into the spawn-on-kelp or *k'aaw* harvest, and other herring fisheries. More detailed maps and information, including fishing methods and locations, are provided for each seascape unit in the ***Herring Distribution and Harvesting Areas*** section of this chapter.

### ***K'aaw or Spawn-on-Kelp Fisheries***

*K'aawdang* refers to gathering or harvesting the herring roe once the fish have spawned—also known as spawn-on-kelp, roe-on-kelp or *k'aaw*. It is an important activity in the seasonal round that many Haidas still continue today. Traditionally, this was usually done by Haida women.

... when I was a kid growing up, all the elder... mostly women got it; it was just women. They used to row out to the different places and load up their little skiffs and row back home and spread it all on the beach at low tide and have it dry on the rock, and then bundle it up and put it away for the winter. (Roberta Olson, Apr. 2007)

The *k'aaw* harvest could start as early as February, when Skidegate families would move down to Burnaby Narrows to their seasonal homes there.

...there used to be a small village [at Burnaby Narrows]. Everybody had their own cabins there and we used to go there to get *k'aaw*, halibut, you know. They used to dry the halibut, dry the *k'aaw*, or salt it. And spend the whole month of April and May down there. Or even earlier than that, it spawns quite a bit earlier than it does around here. (Harvey Williams, Apr. 2007)

... we used to go [to Burnaby Narrows] in March, first part of March. Sometimes last part of February—I don't know when but we lived there. All we live on is seafood—what we gather all over there—and all my mum and them used to take was flour and sugar, so we get the rest of the food from [the] land and from the waters ... my dad had the boat called 'Mabel P'; used to go down on that and stay there, wait 'til the herring spawns. Then... after that we'd leave, come back home. Then we move out of here and put all our salted spawn away and then we moved to west coast. (Roy Jones Sr., Apr. 2007)

There were also many Skidegate Haidas that would simply row out into the inlet for their *k'aaw*. One participant told us about the places he liked to harvest *k'aaw* for food in Skidegate Inlet.

... around *Sgaay.yas*, around *Gud K'aagwas*, around Alliford Bay, around Maude Island ...around...Skidegate Point ... there used to be a spawn on the point there, and then one just

off Kinkles' place, and one just on this side of where the oil station is. And...we used to harvest it also off BC Tel Point ...and that's as far up the Inlet as we used to go, to Maude Island. We didn't need to go any further. (Gary Russ, Mar. 2007)

According to Massett Haidas, herring often spawn at several locations on the north coast of Graham Island, in Naden Harbour and up Masset Inlet.

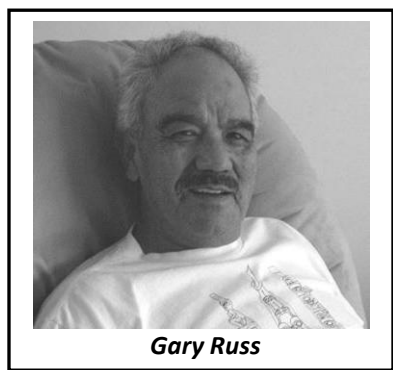
Herring eggs are mostly gathered after they have been laid on kelp. A few of the interview participants said they had tried to harvest it when the wild spawn was on eel grass, but were not successful. One participant told us that he sometimes collected *k'aaw* on conifer branches, a practice that is common amongst other coastal First Nations, but not usually Haidas.

I used to have a bait pond here. And once in awhile, when I want a fresh feed of *k'aaw* I just go up and... the kelp spoils, see? They get white spots... in the summertime when we operate here. So I'd chop off a few branches, hang it in the pond. Then get all I want. I'd do it for my own use because they wouldn't allow us to sell it. (Roy Jones Sr., Aug. 1998)

During his 1998 interview, Jack Pollard said he used to see Haidas sink young hemlocks for the herring to spawn upon, but we recorded no more recent observations.

#### *Early Trade and Sale of K'aaw*

Once harvested, the *k'aaw* may be eaten fresh, dried or salted for storage, traded, sold or used as bait. It is difficult to separate the food harvest of *k'aaw* from the commercial—both may be conducted at the same time and in the same locations. Gary Russ spoke of this for harvests in Skidegate Inlet; "... it was just always the wild product that we harvested, all areas of the inlet... and when I was on the commercial operation, I'd do four or five buckets to take home," (Mar. 2007). Haidas have long participated in spawn on kelp fisheries for economic purposes, such as in well-established trade to neighbouring nations, and selling salted *k'aaw* to markets in Japan as early as the turn of the century. One of our oldest participants, Ernie Wilson, remembered selling the *k'aaw* to a buyer at McKay's Camp inside of Jedway in the 1930s. Ernie said that generally, herring spawn that was laid too thick on the kelp wouldn't dry or store well and so was salted and sold; thinner *k'aaw* was dried and kept for home use or traded locally. Gary Russ also has early memories of harvesting *k'aaw* for trade or sale with his mother when he was young.



"My mother used to sell it. Yeah, I think they got five cents a bundle. ... In the earlier years they would have traded it because we were essentially the only aboriginal group up and down the coast that acquired the spawn on kelp in the wild. Everybody else, they didn't have access to it. What the other mainland nations used was they put hemlock boughs in the ocean and harvested that way." (Gary Russ, Mar. 2007)

It was quite common for Haida women to participate in the *k'aaw* fishery, even many generations ago. Some of the women interviewed for the HMTK study remember gathering *k'aaw* to sell 40-50 years ago.